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PROGRESS REPORT

OF

FOREST ADMINISTRATION

IN THE

PUNJAB

FOR

1886-87.

Price Rs. 1-0-0

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RARY.

No. 216 F, dated Calcutta, the 21st February 1888.

From—SIR E. C. BUCK, *Secretary to the Government of India,*
To—*The Junior Secretary to the Government of the Punjab.*

I AM directed to acknowledge the receipt of your letter No. 312, dated the 16th September last, forwarding the Progress Report of Forest Administration in the Punjab for the year 1886-87, with His Honour the Lieutenant-Governor's review thereof.

2. The Report gives an extremely clear picture of the year's work, and touches on all important subjects, without being overladen with unnecessary detail. The statements appended are, as usual, accurate; and the review by His Honour the Lieutenant-Governor, evincing as it does a special knowledge of the several questions considered, shows that the interest always taken in its forest administration by the Punjab Government has been fully maintained. The Report and the review were submitted with the customary punctuality.

3. The closer association of Revenue and Forest Officers has, on the whole, resulted in good work being done; and the only complaint is that, under the new system, the District Forest Officers are burdened with a considerable amount of additional work, especially of Office work. It is quite possible that this is due to a general enlargement of the sphere of their duties, and is, therefore, unavoidable; but the Government of India notices with satisfaction that His Honour has directed the Conservator to ascertain the exact causes of the increase of Office work complained of, so that it may be possible to devise measures for reducing it in so far as it is due to any inconvenient and unnecessary routine, that may have crept in with the introduction of the scheme under review.

4. An addition of 134 square miles has taken place in the area of Reserved Forests, and the Protected Forests have been increased by 56 square miles during the year under review. The completion of the Forest Settlement in Kangra and Kulu has also been reported. This is so far satisfactory. But the area of Forest Reserves, even with this addition, amounts to only 1·1 per cent. of the area of the Province. Many of the forest areas in the lower outlying ranges of the Himalayas are in foreign territory, and others were unfortunately alienated in the earlier settlements, when the importance of retaining forest lands as State property had not been recognized. The greater part of the waste land remaining comprises inaccessible or barren mountain ranges and the Bar lands of the southern Punjab. These latter lands provide a pastoral or semi-agricultural population with the extensive grazing they require, and it is unquestionable that they cannot be withdrawn from this purpose without causing an entire and undesirable revolution in the habits and customs of the country. So far, however, as the Bar tracts will be opened out by canals, the waste areas must gradually disappear before the spread of cultivation. In these portions of the Bar tracts it will suffice if limited areas are maintained for irrigated plantations in order to supply the agriculturists with timber, firewood, and grass. It would, however, seem advisable to secure compact areas for this purpose before the country is broken up by grants, and such areas can still be selected with due regard to their suitableness; otherwise failures, such as are recorded in previous Reports in the cases of Rodeshah, Tera and Serai Amanat Khan, may again occur. The success of the plantations in Sailaba lands in the Punjab should direct the attention of the Government

more especially to the reservation of such areas, and their acquisition, if necessary, by exchange or otherwise, for this purpose.

5. The progress reported in the compilation of Working-Plans is gratifying, and it has been noticed with satisfaction that no important deviations took place from the Annual Plans of Operations. This may be accepted as a proof that such plans were prepared with forethought and care.

6. The percentage of convictions to cases brought before the Courts was 81, a result which is creditable, seeing that forest offences are generally so difficult of proof.

The results of fire-conservancy, even in forests in which special measures of protection were adopted, have been distressingly bad as regards the Hazara and Rawalpindi Divisions, though both Revenue and Police Officers are reported to have exerted themselves in aiding the Forest Department in their respective districts. Large fires also occurred in the Kangra, Multan and Phillour Divisions, in forest areas in which special measures were taken to exclude them. The total area in which failures occurred in spite of such measures aggregate 58,800 acres; and, in addition to this, 76,000 acres were burnt in forests in which no special measures were adopted to secure protection. Some of the fires are said to have been due to incendiarism, but many spread from adjacent village wastes or grass lands. His Excellency in Council desires that the areas in which special measures are undertaken should be extended, and that these measures themselves should be rendered more effective. No doubt the protection of Chil Forests is a matter of considerable difficulty, but it must be secured, or the very existence of these forests will be endangered and their reproduction rendered hopeless. A system of fire-lines, completely cleared of all tree-growth, with all inflammable material outside them burnt away, combined with careful guarding and sweeping of the lines, should be tried; and it seems essential that the services of the inhabitants of the adjacent villages should be utilized in this work, in order to give them a direct interest in the protection. In this manner the spread of fires from grass-lands or adjacent forests may be prevented.

7. His Excellency in Council agrees with His Honour the Lieutenant-Governor that when the reproduction of forest is the sole object *bonâ fide* Bar lands need not be closed against grazing of all kinds except for a certain number of years sufficient to allow the stools to coppice. As a matter of pastoral economy, however, the establishment of fodder reserves in the Bar tracts by the entire closure of a certain percentage of the grazing area deserves consideration. From such areas grass could be cut in ordinary years, and they would always be available as grazing grounds in years of special scarcity, just as the areas now periodically closed actually guarantee a supply of fodder during the annually recurring months of scarcity.

8. Natural reproduction in the Deodar forests is everywhere reported to be satisfactory, and blanks are said to be gradually filling up with young growth where immunity from fires has been secured. There can be no doubt that the forests of this species will, in a not very remote future, be much more extensive and valuable than they were when first consigned to the care of the Forest Department more especially so in the leased forests of Bashahr and Chamba. It is in the low hills, such as the Pabbi, the Salt Range, &c., where the forests have been reduced in extent and natural vigour of growth by centuries of mismanagement and maltreatment, that it is difficult to obtain reproduction without the most strict and protracted conservancy; but there can be no doubt that it

will ultimately be secured in all areas where forest growth once existed. No seedlings have as yet appeared on the experimental plots which were fenced in some years ago in the Bar lands of the Province. The maintenance of forest growth within these tracts is not of the same vital importance as in the drainage areas of the small streams debouching direct into the plains; but His Excellency in Council considers that the experiments should nevertheless be continued for a long series of years, in order to solve the question of the natural seed-reproduction of the species special to Bar land, even if nothing more tangible be gained thereby than mere knowledge.

The failure of the coppice in parts of Changa Manga is a matter of serious importance, and His Excellency in Council is glad to see that the Conservator has taken steps to investigate the causes of the failure.

The Conservator's remarks under the head of artificial reproduction have been read with interest, especially those which refer to the winter-planting of deodar in Chamba, the association of deodar with nurses of Holm Oak (*Quercus Ilex*) and of edible pine (*Pinus Gerardiana*), and the reboisement of the Pabbi.

9. His Excellency in Council observes that half the yield of the forests is absorbed by free-grants and right-holders. It is understood that much of this represents inferior material, but it at any rate clearly proves that the forests of the Province possess for the country a direct value far beyond that which is represented by the revenue collected by the Department.

His Excellency in Council has read with interest the remarks made with regard to departmental working, especially the paragraphs referring to the working of the Bakáni Slide, with the help of which 2,231 logs were brought down during the year from a previously inaccessible forest, and to the timber works in Bashahr, which present special difficulties and necessitate special and careful organization with regard to labour and food supplies.

10. The financial results are the highest on record, both as regards gross and net Revenue. They compare with those of the previous year as follows:—

Year	Receipts.	Charges	Surplus.	Proportion of Surplus to Gross Revenue.
				%
1886-87	11,27,277	7,16,510	4,10,767	36
1885-86	8,50,419	6,75,483	1,74,936	21
Increase in 1886-87 . . .	2,76,858	41,027	2,35,831	15

11. In conclusion, His Excellency in Council concurs in the commendation bestowed by the Lieutenant-Governor on the Officers of the Department.

Government of India Central Printing Office—No 727 R & A —1 3-88 —380

Proceedings of the Hon'ble the Lieutenant-Governor of the Punjab in the Forest Department, No. 311, dated 16th September 1887.

READ—

The Progress Report of the Forest Administration in the Punjab for the year 1886-87, submitted by the Conservator with his letter No. 734, dated 5th August 1887, and received on the 8th of August 1887.

REMARKS.—The Lieutenant-Governor has observed with satisfaction that the scheme designed to bring about the closer association of Revenue and Forest Officers has been found to work well on the whole. It is reported, however, that under the new system a considerable amount of additional work, especially office work, has been thrown upon the officers in charge of Forest Divisions. This appears to the Conservator to be unavoidable, but His Honor is unwilling to accept this conclusion without further examination of the reasons for it. It is not the wish of the Government to increase office work, but, on the contrary, to diminish it. The Conservator should ascertain and report the exact causes of the increase of office work with a view to a remedy being applied, if possible.

2. In the Review of the Report for 1885-86 the Government of India allowed that the change of system would probably involve some additional labour, but it was expected that this would diminish in time, and perhaps practically represent greater care and attention. In this sense, of course, there can be no objection to more work being done. The object of the above remarks is to reduce work which is merely due to inconvenient or unnecessary routine. Indeed, instructions directed to this end have already been issued in a recent circular of the Financial Commissioner, in which Forest Officers are authorized to communicate direct with the Conservator instead of through the medium of the District Officer on such matters as accounts, establishments, examinations, timber and plantation work, and other like topics.

3. In paragraph 2 of the Review already quoted the Government of India asked for an expression of the Lieutenant-Governor's opinion in the next annual Review on the question how far the Financial Commissioner should exercise executive control over the forests in the several districts beyond that implied in his approval of working plans and annual plans of operations. The rules which define the relations of the Conservator of Forests with the Financial Commissioner were approved by the Government of India in its letter No. 480 F., dated 28th May 1885, and have since been issued in the Financial Commissioner's Circular No. 42 of the same year. The recent circular of the Financial Commissioner relating to the correspondence of Forest Officers, to which reference has been made above, indicates the nature of the subjects over which the Financial Commissioner exercises no control. Moreover, the Financial Commissioner is not concerned with the management of leased forests in Native States or of the Chánga Mánga Plantation or River Depôts; and, although his opinion may sometimes be conveniently taken in regard to questions arising in leased forests, His Honor considers that the Conservator's position in reference to forests of that class should remain, as now, unaffected by the new arrangements in regard to the relations of Forest and Revenue Officers. As to the general working of those arrangements, the Lieutenant-Governor would deprecate (except, indeed, upon very strong grounds) any re-opening of the questions settled in 1885 after very full consideration. No such grounds have yet been brought to his notice; and he is generally of opinion that the whole scheme, including that part of it which defines the relative responsibilities of the Financial Commissioner and the Conservator of Forests, has worked well, and should, for some time to come, be left to its operation.

4. To the areas of Reserved and Protected Forests there was a net increase of nearly 135 and 56 square miles respectively during the year. These large additions were chiefly due to the completion of the Forest Settlement in Ráwalpindi, where areas of 65,624 acres and 43,358 acres were gazetted as

Reserved and Protected Forests respectively. In the Umballa District the Kalesar Forest comprising 11,829 acres and in Simla an area of 8,644 acres at Kot Khái and Kotgarh have been brought under the Forest Act. The work of Forest Settlement in Kángra and Kulu has been completed, and the Settlement Officer's report is, it is understood, pending with the Financial Commissioner. His Honor hopes to receive the report at an early date.

5. The Conservator mentions in paragraph 10 of the Report that the Rája of Chamba does not wish to allow any new forests to be reserved or agree to trees being sold from certain unreserved forests. This calls for inquiry, and the Commissioner of Lahore is requested to report on both points. It is observed that under the first of the rules annexed to the revised lease of the Chamba forests the Conservator appears to be empowered to declare any forest, with certain exceptions specified in the lease, to be reserved; but Rule 2 requires the boundaries of the reserves to be determined in concert with the Rája, in whom also, by Rule 8, is vested the management of the unreserved forests. These provisions of the rules will, no doubt, be borne in mind by the Commissioner when submitting the report required.

6. The remarks of the Conservator in paragraph 5 of the Report regarding the large area of Government land which is not under the Forest Act call for some notice. The Conservator's figures are taken from the Land Revenue Administration Report for the year 1884-85. Taking the figures in the Report for the year 1885-86, which are more recent, it appears that there are in the Punjab 16,636 square miles of Government land, excluding land held on cultivating leases or occupied by Departments other than the Forest Department. Of these 16,636 square miles, 3,402 square miles are shown as under the Forest Department and 13,234 square miles as under District management. It is believed that only a small proportion of the area under District management is really of the nature of forest land. The greater part is either inaccessible or barren mountain range or the Bar lands of the Southern Punjab which supply pasturage for some pastoral nomads and for an agricultural population which has always of necessity made its livelihood out of the land partly by cattle farming and partly by cultivation. Thus the statement from which the figures are taken shows that of the 13,234 square miles under District management as much as 8,700 square miles lie in the Mooltan, Jhang and Montgomery Bar tracts. The 1,774 square miles in the Dera Gházi Khan, Dera Ismail Khan and Bannu Districts are of much the same character. The area in the Hazára District, 1,116 square miles, is doubtless to a large extent barren mountain land; while of the remaining area, 1,197 square miles are in the Shahpur and Muzaffargarh Districts, and constitute the grazing pastures upon which the cattle of the agricultural population of these districts are dependent.

7. Generally, it may be said that in the hill tracts, Hazára, Kángra, Kulu, the Punjab Hill States, Simla and parts of Ráwalpindi, the questions of forest reservation or protection have received or are receiving close attention; and the probability is that in course of time as many areas as it is safe or practicable to treat in that way will be found to have been brought under the Forest Act or under analogous provisions where that Act does not run or is inapplicable. To the tract of country which may be roughly described as the vast triangle lying between the Sutlej and the Indus below a line drawn from Ferozepore to Pesháwar, but including some parts of the Trans-Indus Deraját, very different considerations apply. Large tracts will be opened out before long by the new canals and the new railway; and the requirements of a peculiar, though at present very sparse, population have to be kept carefully in mind. This important subject is now under the Lieutenant-Governor's consideration and is too extensive to be discussed fully in the limits of this Review. As the Government of India is aware, the case of the Lower Siwáliks is the subject of special correspondence.

8. Satisfactory progress has been made during the year in the Working Plans Branch, and the information given in the chapter of the Report dealing with this subject is interesting. The orders of Government approving the Working Plan of Chánga Mánga have recently issued. The Chamba plans have

also been approved, and the orders thereon will shortly be communicated to the Conservator. The Financial Commissioner has been asked to issue the instructions approved by the Government of India for the guidance of Forest Settlement Officers in proceedings under Chapter II of the Forest Act, and to add to them a circular defining the duties of Revenue Officers in connection with Working Plans with a view to securing that the forest wants of the population adjacent to the reserves shall not be overlooked.

9. The increase in the number of Forest offences from 1,114 to 1,299 is probably due in part to the fact that the area under the Forest Act has increased. The number of animals impounded for trespass is less than in 1885-86. The increase in the Chenab Division, however, perhaps calls for further notice, and the localities where it has occurred should be reported.

10. The fire season of 1886-87 has been a disastrous one. The number of fires is, it is stated, probably without precedent. As to the remark that only 4 per cent. of the forests were burnt, His Honor believes that the "exceptional immunity" from fire claimed by the Report is mainly due to so large a proportion of the area being incombustible either from absence of sufficient grass and bush as in the Bar and Salt Range or from the nature of the trees, as in deodár and other high forests. No doubt the results of this year are very bad. They are said to be due to the exceptional drought which prevailed throughout the Province during the months preceding the rains, but the matter calls for further inquiry. The attention of the Commissioners of the Pesháwar, Ráwalpindi, Derajat, Jullundur and Delhi Divisions is invited to the remarks and particulars given in the Report regarding the fires in Hazára, Ráwalpindi, Muzaffargarh, Kángra and Bashahr and in the Kalesar Forest; and they are requested to ascertain and report the causes of these occurrences. The Report does not contain any information as to the amount of damage done by the fires, and in future reports such information should be given, so far as may be practicable. It is stated that the Kalesar Forest was burnt, but it should have been added whether the undergrowth only or the whole or part of the forest trees have been destroyed, and how far the destruction wrought will cripple the resources of the forest. Similarly, it would have been interesting if the Report had contained some further particulars concerning the great fire in the vicinity of Murree and the damage caused thereby. The Conservator remarks that except where the Rules of 1855 are in force there are no sufficient means of dealing with fires; but the Lieutenant-Governor does not feel sure that these rules are not dangerously loose. In Kulu, where the rules were brought into play against fires in the year under report, the strongest discontent appears to have been excited, and His Honor fears not without good cause.

11. The area closed entirely against grazing has been increased from 513 to 691 square miles, and that closed for part of the year has decreased from 338 to 267 square miles. The area closed against browsing animals is given at 1,232 square miles against 1,139 square miles during the previous year. His Honor notices that the area closed partly or wholly in the Chenab, Lahore, Mooltan and Montgomery Divisions was very considerable in the year under report. Part of this is no doubt Bela land or may possibly be canal-irrigated like Chánga Mánga. But part is no doubt simple Bar. The Conservator should furnish a report showing what Bar lands have been closed, with what objects, and under what orders. His Honor has observed with attention the reports of the failure of natural reproduction in Bar lands, which quite coincide with his own experience. The fact that closures in these tracts, without resulting in reproduction, interfere materially with the pastoral economy of the Bar country and greatly irritate the people is an important element in the consideration of the large question referred to in paragraph 7 above. His Honor is very strongly of the opinion that in the case of the Bar or dry upland wastes of the Punjab the advantage of stopping grazing, (except of browsing animals for four or five years after felling to allow trees to coppice), is certainly not nearly sufficient to justify the great annoyance and considerable injury to the graziers caused

thereby. The case is, of course, different if canal water is available or if the land is Bela land in river beds in which plantation or natural reproduction is practicable.

12. The sections of the Report which deal with artificial reproduction, experiments and exotic trees, communications and buildings, and yield and working, call for no special notice.

13. The financial results of the year's working have been satisfactory. The net surplus was Rs. 4,10,767 as compared with Rs. 1,74,936 for the previous year. The receipts were Rs. 11,27,277, an increase of Rs. 2,76,858. The expenditure amounted to Rs. 7,16,510, an increase of Rs. 41,027 only. The increase in the revenue is due to extended timber works, principally in Chamba, Bashahr and Pángi, to the disposal of Kulu sleepers and to increased sales of fuel to the Railway Department in the Chenab and Montgomery Divisions. The amount of outstanding revenue at the close of the year, Rs. 65,970, is large. This is chiefly on account of grazing revenue in the Gujránwála District and the Montgomery Division, where distress prevailed among cattle-owners.

14. In conclusion the Lieutenant-Governor desires to thank Lieutenant-Colonel Bailey and the officers of the Department for the work done during the year.

ORDER.—Ordered that this Review be circulated as usual with the Report;

Also that it be published in the *Punjab Government Gazette*;

Also that it be forwarded to the Government of India in the Revenue and Agricultural Department for information;

Also that the Review and Report be forwarded to the Commissioner, Lahore, with reference to paragraph 5 of the Review, and to Commissioners, Peshawar, Rawalpindi, Derajat, Jullundur and Delhi, with reference to paragraph 10, for the supply of the reports thereby required.

By order of the Hon'ble the Lieutenant-Governor,

C. L. TUPPER,

Junior Secretary to Government, Punjab.

Punjab Government Press, Lahore.—19-9-87—394.

PROGRESS REPORT

OF

FOREST ADMINISTRATION IN THE PUNJAB,

FOR THE YEAR 1886-87.

By Lieut.-Colonel F. BAILEY, R.E., *Conservator of Forests.*

INTRODUCTION.

Scheme for the closer association of Revenue and Forest officers.

THE scheme designed with a view to bring about the closer association of Revenue and Forest Officers, has now been under trial for nearly two years, and has been found to work, generally speaking, very well, the Forest Officers having received a considerable amount of advice and support from the Revenue Officers, especially in the matter of forest fires. It will probably be inconvenient to carry it out to its fullest extent, until a separate Forest Officer (who might in certain cases be a Sub-Assistant Conservator) can be provided for each district. It is possible that, in some districts not included in the new arrangement, such for example as Dera Ghazi Khan, where the forests held in charge by the Department are few and scattered, it may prove desirable to place them temporarily under the Deputy Commissioner.

Additional work thrown on the Forest Officers.

2. The Officers in charge of the forest divisions, almost without exception, remark that, under the new system, a considerable amount of additional work, especially office work, has been thrown upon them. This appears unavoidable; and it points to the importance of providing, within a reasonable time, a separate Forest Officer for each district. In the meantime, the amount of office work should be reduced as far as possible.

The system generally approved.

3. The system which has been introduced is, so far as the relations between the Revenue and the District Forest Officers are concerned, an excellent one; and it should be maintained and developed.

Its partial application to Bashahr.

4. The Circular inaugurating it does not of course apply to leased forests; but the Officer in charge of the Bashahr Division sends a copy of his plan of operations to the Deputy Commissioner, and also submits his weekly reports through him.

CHAPTER I.—AREA AND BOUNDARIES.

1.—AREA.

Total area of forest and waste land.

5. The following table shows the area of forest and waste land at the disposal of the Government of the Punjab, both at the commencement and at the end of the year. It will be seen that the areas of reserved and protected forests were increased by 121 and 56 square miles respectively.

	At the commencement of the year.	Added.	Excluded.	At the close of the year.	Percentage of each class.		Percentage of forests to whole area of British territory in the Province, 1,06,632 square miles.	
Under the Forest Act { Reserved forests ..	1,068	125	4	1,189	7	9	1·1	1·4
Under the Forest Act { Protected forests ...	321	68	12	377	2		0·3	
Unclassed forests not under the Forest Act { On books of Forest Dept. ...	2,709	770	207	3,272	20	91	3·1	14·2
Unclassed forests not under the Forest Act { Not on books of do. ...	12,586	...	740	11,846	71		11·1	
TOTAL ...	16,684	963	963	16,684		100	..	15·6
Reserved forests formed under leases in Chamba and Bashahr ..	349	..	...	349				
GRAND TOTAL ...	17,033	963	963	17,033				

The total area of 16,684 square miles is taken from Statement No. IX of the Land Revenue Administration Report for the year 1884-85, which is the most recent source of information accessible to the Conservator at the present time. This statement also shows 614 square miles to be held under cultivating leases, and 115 square miles under "other Departments," thus bringing up the total area of the "Government land" in the Province to 17,413 square miles.

It appears then that, including reserved and protected forests already formed, 16,684 square miles of forest and waste land remain at the disposal of Government, both for permanent retention as forests and for grants. The figures given speak for themselves, and show that the proportion borne by the reserved and protected forests to the whole area of British territory is 1·1 % and 0·3 % respectively, the total under the Forest Act being thus less than 1½ % ; while the Government forests and waste lands *not* under the Act represent about 14¼ %, and the Government forests and waste lands of all classes taken together represent about 15½ % of the entire area of British territory. The question may now fairly be considered as to the proportion of the remaining area of 16,684 square miles, which can be considered still available for grants or cultivating leases. It will be noticed that only 9 % of the area of Government forest and waste lands have been brought under the provisions of the Forest Act, 7 being under Chapter II and 2 under Chapter IV ; and that, consequently, 91 % of them remain to be administered under other Laws and Regulations. 349 square miles of leased forests are not included in the above figures.

Changes in area during the year.

6. The abstracts on form No. 49 clearly show the nature of the changes that have taken place during the year.

(a)—Reserved Forests.

The reserves added and those excluded by notification during the year were as follows, *viz.*—

Added.		*Acres.*
Rawalpindi district	... Murree and Kahuta forests ...	65,624
Gujranwala „	... Chichra forest	300
Amballa „	... Kalesar forest	11,829
Simla „	... Kotgarh and Kotkhai forests ...	8,644
	... Total ...	86,397

The three first named were previously unclassed forests on the books of the Department.

Excluded.		*Acres.*
Hazara district	... Military locations	307
Jullundur „	... Sarangwal forest transferred to the unclassed list	1,104
	Total ...	1,411

(b)—Village Forests.

There are no forests of this class.

(c)—Protected Forests.

The additions consisted of 43,358 acres of unclassed forests, in the Murree and Kahuta tahsils of the Rawalpindi district. 2,250 acres were given away in grants in the Gujranwala district during the years 1884, 1885 and 1886; those given in the two former years had not previously been struck off the Departmental registers.

(d)—Unclassed Forests.

The figures shown in form No. 49, under this head, relate only to the areas on the books of the Department. Those which, before the issue of Financial Commissioner's Circular of the 1st August 1885, were managed separately by the Deputy Commissioners, are not included. The reserved portion, 1,104 acres, of the Sarangwal forest, in the Jullundur district, ceased to be reserved, and the

entire area of the forest, *viz.* 1,304 acres, was made over to the Military Department as a grazing rakh. The following areas were brought on to the registers for the first time, *viz* :—

			Acres.
Rawalpindi district	...	Murree and Kahuta forests ...	1,56,200
Kangra „	...	Forests in the Nurpur Tahsil ...	3,19,351
Multan „	...	Forests in the Lodhran range ...	4,376
Bashahr „	...	Area stuck off the list of reserves last year, but omitted from the list of unclassed forests	5.967
		Total ...	4,85,894

Areas of 1,036 acres, given out in grants in the Lahore district, and of 800 acres leased for cultivation in the Montgomery district, have been struck off the registers. The area of unclassed forests not borne on the books of the Department, is not accurately known. It would appear appropriate that, under the conditions brought about by Financial Commissioner's Circular of the 1st August 1885, the whole of the forests and waste lands not considered available to be given out in grants or cultivating leases, should in future be shown in form No. 49.

Proposal to reserve areas on the new canals

7. In the review by the Local Government on last year's report, a suggestion made by the Financial Commissioner, to demarcate well defined and compact areas as reserves on the new canals, in the Multan, Montgomery, and Gujranwala districts, is referred to. This is an excellent proposal, and the land should be reserved; but it is feared that it will hardly be safe for this Department to commit itself to any extensive projects in the way of *irrigated* plantations, until the effect which the finding of coal at Dandot will have on the demand for fuel by the Railway Department, is more accurately known. Already the Conservator has been informed that the outturn of Changa Manga for 1887-88 is not required, and that only a portion of that from the Bhera rakhs can be taken He has also recently learnt that the section of the N.-W. Railway from Rawalpindi to Peshawar will be supplied with coal from 1st August 1887; while it is possible that, in consequence of coal being available for the Sind-Sagar Railway, and for the Section of the N.-W. Railway from Lahore to Jhelum, the outturn of Changa Manga for 1888-89 will not be required. It would appear desirable, in the meantime, to reserve as large an area as possible of the tracts on the banks of the Indus and other rivers, which are annually inundated, as well as of other forests and waste lands now at the disposal of Government.

Hazara village forests.

8. The question of the village forests proposed to be formed in Hazara is still pending.

Grants of land from protected and unclassed forests.

9. Grants of land, amounting to 2,250 acres, were made from protected forests; 1,036 acres were granted, and 800 acres were given out on cultivating leases, from the unclassed forests on the books of the Department.

Chamba.

10. It is reported that the Rajah of Chamba "does not wish to allow any new forests to be reserved," and that he does not "see fit to agree" to trees being sold from certain unreserved forests. The question of the rights of Government in respect of these questions will, with reference to Nos. 1, 2 and 9 of the Rules made under the lease, be investigated.

Simla Hill States.

11. Mr. Minniken remarks that the drain on the forests of the protected States within 20 to 30 miles of Simla, for pine, oak, walnut and several kinds of firewood, continues, without any adequate measures being taken to ensure their regeneration. The stock of deodar is nearly exhausted; but in Bhujji, Kaibhar, Suket, Mangal, Shungri, and Kumharsen, the hills on either side of the Sutlej are clothed with a poor forest, which, with the exception of a few tracts preserved as "shikargahs," is burnt annually to provide fresh grass for the flocks and herds. Mr. McIntire

is engaged on an examination of these States; and it is hoped that something may yet be done to save the remnants of these once valuable forests.

Forest Settlement.

12. A complete statement showing the progress made in Forest Settlement work in the Punjab will be given in next report. The following remarks will show what was done during the year.

Kulu.—The settlement of the Kulu forests has been completed, but the forests have not yet been gazetted under the Forest Act.

Shahpur-Kandi.—The settlement of the Shahpur-Kandi forests, in the Gurdaspur district, is still pending.

Kalesar.—The Kalesar forest, in the Umballa district, area 11,829 acres, was settled and gazetted under Chapter II of the Forest Act.

Murree and Kahuta.—The settlement of the Murree and Kahuta forests, in the Rawalpindi District, was completed; and the forests have been gazetted as follows:—*viz.*, 65,624 acres as reserved, and 43,358 acres as protected forests.

Kalachitta.—The Kalachitta forest, Rawalpindi district, has been settled as a protected forest, under Chapter IV. of the Act. It is feared that rights have been conceded to which the people were not fairly entitled.

Gujrat District.—Ten reserves, previously gazetted under Section 34 of the Forest Act, were under settlement during the year.

Kangra.—Orders on the Kangra Forest Settlement have not been issued.

2.—Boundaries.

General remarks.

13. Satisfactory progress was made during the year in the demarcation of forests, clearance of boundary lines, and repair of pillars. It is difficult to summarise the work done, as the reports of Divisional Officers do not treat the question in an uniform manner. An endeavour will be made to render a complete account of this branch of the departmental work in next report.

Hazara.—23 miles of boundary lines were cut round reserves in Khanpur, and pillars were repaired both there and in Dungagally.

Rawalpindi.—The checking of pillars in Murree and Kahuta, as well as in Kalachitta, was completed, all but 8 pillars having been erected before the close of the year; but the construction and repair of 590 village tri-junction pillars of large dimensions remain to be executed. This appears to be the work of the Revenue rather than of the Forest Department. The private lands within the forests are said to be insufficiently demarcated, and the attention of the Commissioner will be invited to this.

Chamba.—Five forests were demarcated by 60 masonry and 25 "kutcha" pillars.

Kangra.—Work in the reserved forests consisted in the repair of 381 pillars, and the clearance of 218½ miles of boundary lines. A large number of "kutcha" pillars was erected by the right-holders round the protected forests. There is a dispute, which ought to be settled, as to the boundary between the Soldah reserve and the Chamba State.

Kulu.—Repairs to 1,172 pillars were executed, and seven protected forests in Lahoul were demarcated.

Jhelum.—The demarcation of areas within the reserves, which are either owned by private persons or burdened with grazing rights, has been completed, except in the Tilla reserve; 1,097 pillars were erected at a cost of Rs. 793. The condition of the demarcation in the unclassed forests is said to be very unsatisfactory both in Shahpur and Jhelum. The approaching settlement will remedy this defect in the former district.

Chenab.—The demarcation of Rakh Rasul, and of a piece of private land within it, has been completed; more than a mile of trench having been dug, and 22 masonry pillars built. 113 new masonry pillars were erected, and 195 similar pillars were repaired. Over 20 miles of the boundary of the Bhera rakhs were demarcated by means of interrupted trenches, 2′×2′. 26 masonry pillars were erected on the southern boundary of the Jhang grazing Circle.

Lahore.—The demarcation of that part of the Changa Manga reserve which lies to the north of the canal, has been completed; a length of 13 miles was marked by interrupted trenches and 58 masonry pillars. All compartments of blocks I, II and III were marked by concrete blocks bearing numbers. The Jhok reserve has been completely demarcated by interrupted trenches, for which wooden posts were substituted near the river; the length of boundary is nearly 22 miles. Rakh Kot-Lakhpat has been similarly demarcated. A dispute regarding the limits of the Shahdera plantation, near the Ravi bridge, has been settled, and the line has been demarcated.

Multan.—50½ miles of boundary were demarcated, and 1,079 pillars were erected.

Montgomery.—During the year 33 pillars were erected, 15½ miles of boundary lines were cleared, and ¾ of a mile of trenching was excavated. The boundaries of all reserved forests are completely demarcated.

Phillour.—About 4 miles of the boundary of the Dagshai plantation were demarcated by pillars and trenches.

CHAPTER II.—SURVEYS, WORKING PLANS AND ANNUAL PLANS OF OPERATIONS.

1.—Surveys.

Statement of areas surveyed.

14. A full statement of the areas surveyed by various methods, and of those remaining unsurveyed, was given in last report; and it has not been considered necessary to repeat this for 1886-87.

Work done during the year.

15. In *Hazara*, the small scale maps mentioned last year, are being copied for distribution to the Rangers. In *Rawalpindi*, the maps of the Murree and Kahuta Tahsils, on the scale of 8″=1 mile, were completed, in connection with the Forest Settlement. Some of the boundary lines in Bagham and Kalachitta were revised by a Settlement Surveyor. In *Kangra*, sketch maps are being prepared of the forests which, with a view to their being gazetted under Chapter IV of the Forest Act, were demarcated in 1885-86. In *Kulu* an index map of the Waziri Rupi forests was made; and sketch maps have been completed of the seven demarcated protected forests in Lahoul. A party of the Imperial Survey Department is engaged on a survey of Outer Seoraj. In *Bashahr* the Imperial Forest Survey Department is believed to have completed its field work in the Kailas, Chini and Kilba ranges, and to have triangulated the Neogli range. Mr. Minniken prepared a set of sketch maps of his forests based on an enlargement of the atlas sheets. The *Jhelum* maps, referred to in para 34 of last report, have not yet been copied, as certain points, raised during the examination and attestation of Mr. D'Arcy's abstracts from the Forest Settlement records, have not yet been decided. In *Lahore* the survey of Changa Manga, mentioned in para 30 of last report, was completed. Surveys of three small areas in Rakhs Dhig, Chunian and Bughiana were also executed. Maps of the Kalesar forest, *Phillour*, prepared by the Forest Survey Department, were received.

Preparation of Divisional sets of maps.

16. A commencement was made, in the Provincial Working Plans Branch, to prepare a complete set of maps of the forests in each Division, and the work was completed for Lahore and Rawalpindi. The Conservator proposes to take up this question during his

office inspections; and, if necessary, to solicit the aid of the Forest Survey Department, in order to make the collection of maps as complete and useful as possible.

2.—Working Plans.

Officers in charge of the Provincial Working Plans Branch.

17. Mr. D'Arcy held charge of the Provincial Working Plans Branch until the 25th August, when he proceeded on furlough, and was succeeded by Mr. Pigot.

Chamba, Kalesar and Changa Manga.

18. The Working Plans of the forests in the Chamba Division, mentioned in paras 35 and 36 of last report, were printed, and have been examined and approved by the Inspector General of Forests; the final orders of Government have not yet however been passed on them. The Working Plan of the Kalesar forest is undergoing revision, in accordance with the suggestions made by the Inspector-General. The Working Plan for Changa Manga was completed, printed, and approved by the Inspector-General; but it has not yet been sanctioned by Government.

Murree and Kahuta.

19 Mr. Pigot was employed, while attached to the Rawalpindi Division, in collecting data relative to the forests of Murree and Kahuta; and he has been engaged on the Working Plan since he relieved Mr. D'Arcy. In these tahsils of the Rawalpindi district there are over 100 forests, which have now been brought under the Forest Act.

The framing of this Working Plan is of especial importance, as the Forest Settlement has recently been completed. Hitherto there has existed no accurate information as to the stock of trees on the ground, and it has therefore been impossible to arrange the fellings on a safe basis. It is now seen that the forests on the lower hills have been much overworked in former years, and that comparatively little valuable timber remains in them. This is also the case, in a less degree, in the pine forests at higher altitudes, the best class of trees having been removed from the more accessible localities; but the forests are fairly well stocked with young timber, and will, in the course of time, become very valuable, if only they can be successfully protected against fire.

Working Plans prepared by local Officers.

20. Of the Working Plans referred to in para 38 of last report, as having been under preparation by local Officers, that of the Bhera rakhs by Mr. Copeland has been approved by Government. Mr. McIntire's plan of Shahdera-cum-Jugian has been printed and approved. Mr. Gisborne Smith was employed during the early part of the year in collecting data for a Working Plan of the Pangi forests; Mr. McIntire was engaged during the latter part of the year, on special duty, in an examination of the Kotgarh and Kotkhai reserves, with a view to drawing up a Working Plan for them.

Hazara Division.—In the Khanpur Range, the fellings have been less than those provided for in the Working Plan by 3,801 acres, with an estimated outturn of 1,39,065 maunds of wood. The period for which the plan was framed will expire in 1888; but at the present rate of felling, the prescribed area will not be worked over before 1893. The causes of this deviation from the provisions of the plan were explained in last report. An attempt was made, as an experiment, to cut and stack the wood departmentally, on an area of 39 acres; but although a more accurate record of the yield was made under this system, the price realized barely covered the cost of the work.

Chamba Division.—The Working Plans in the Chamba Division were adhered to, except in the case of the Bhandal Circle, where, no Forest Ranger being available, timber works only were undertaken, and were carried out by contract.

Bashahr Division.—As stated last year, the old preliminary plan and suggestions by the Inspector-General of Forests, with the inspection notes of the Conservator, must serve as a guide in Bashahr, until a regular Working Plan can be made.

Chenab Division.—In the Chenab Division the Working Plan of the Bhera rakhs was carried out. The outturn from Deowal was, however, 80,280 cubic feet (stacked) less than the estimated yield ; and this amount was cut in Bahowal, in order to make up the 3,00,000 required to supply the Railway Department.

Lahore Division.—In the Lahore Division, there are now two Working Plans. *viz.* :—those for Changa Manga and for the Shahdera-cum-Jugian plantations.

Changa Manga.—The area is divided into two Circles, *viz.* :—

Plantation Circle	...	10,132	acres.
Rakh ,,	...	10,111	,,
Total	...	20,243	,,

The former is to be worked as coppice with standards, the rotation for coppice being 15 years ; and the latter as simple coppice, with a rotation of 20 years. The total estimated annual yield is 10,22,705 cubic feet (stacked) of fuel, and the net annual revenue Rs. 9,397.

Shahdera-cum-Jugian.—The treatment is that of coppice with standards, the rotation for coppice being 15 years. The estimated annual yield is 1,20,000 cubic feet (stacked), and the annual net revenue Rs. 8,033.

Control books.

21. The entries in forms No. 2 and 3 for 1885-86, relating to forests for which Working Plans have been prepared, were made in the Conservator's Control books. Owing, however, to the fact that the plans have not always been fully acted up to, the balances have not in all cases been brought forward in the manner prescribed in section 70 of the Code.

Cost of the Special Working Plans Branch

22. The total expenditure of the Special Working Plan Branch during the year was as follows :—

Purchase of tools and plant.	Pay of temporary establishment employed on mapping work.	Pay of labourers &c., employed on Working Plans.	Salary of Officer in charge.	Salaries of Forest Establishment.	Salaries of Office Establishment.	Travelling Allowance of the Officer in charge.	Travelling Allowance of Forest Establishment.	Travelling Allowance of Office Establishment.	Stationery, postage and contingencies.	Carriage of tents and records.	Office rent.	Total.
A VI *c*	A VIII *a*	A VIII *c*	B I *b*	B I *c*	B I *d*	B II *b*	B II *c*	B II *d*	...	B III *b*	B III *c*	
15	509	368	5,765	902	967	1,579	549	240	109	76	222	11,301

The expenditure was incurred principally on the Working Plans of Changa Manga and of Murree and Kahuta.

Areas for which Working Plans exist.

23. The following statement shows the areas in the Punjab for which Working Plans exist :—

	Reserves.	Protected.	Unclassed.	Total in acres.
Chamba	76,603	...	...	76,603
Changa Manga	20,243	...	...	20,243
Bhera	...	...	1,16,202	1,16,202
Khanpur	18,580	...	...	18,580
Shahdera	1,254	...	...	1,254
Kalesar	11,671	...	...	11,671
Total ...	1,28,351	...	1,16,202	2,44,553

3.—Annual Plans of Operations.

The annual plans of operations were prepared, submitted, and sanctioned, in the manner described in last report (para 46). There has been no important departure from the lines laid down, but deviations from the plans in matters of detail are unavoidable. These arise from a variety of causes, such as (i) postponement, (ii) abandonment of the proposals, (iii) changes in the state of the market, (iv) inadequacy of supervision.

Postponement.

24. As an example of (i) may be cited the following, *viz.* :—

The proposed rest-house at Manjir, Chamba, was not built, because it was believed that the Raja intended to construct a new road lower down. The repair of boundary pillars and erection of guards' houses in Serai Sidhu, Multan, were postponed pending the settlement of the extension question. The clearing of boundary lines in the Alipur range, Muzaffargarh, could not be completed in consequence of a delay in the laying down of the lines by patwaris. The fellings in Kalesar, Phillour, were postponed, pending the approval of the Working Plan, which is under revision.

Abandonment of proposals.

25. Under head (ii) may be mentioned, among other things, the following, *viz.* :—

In Chamba, the Dalhousie forest was not demarcated, as the Raja would not agree to its reservation ; and the proposed road along the cliff to Thanala forest was not made, as its cost turned out to be excessive. The closure of bamboo tracts in the unclassed forests of Kangra was objected to by the Settlement Officer. The proposed road from Dobi to Fojal Kalaun, in Kulu, was not constructed, as waste land could not be made available. In the Chenab Division, the intention to sow 500 acres in Bhagomali was not carried out, as it is now proposed to give up the ground. The closure of certain rakhs in Lahore was maintained throughout the year, in accordance with the provisions of the Working Plan and the scheme for the management of fuel and fodder reserves ; other areas were, however, opened, on account of the scarcity of grass. The opening of the Kalesar forest to grazing was stopped on account of fires.

Changes in the market.

26. The principal deviations due to (iii) changes in the market, were the following—

Fellings in four protected forests of the Chenab Division were not made, as the demand was insufficient. The proposed fellings in Kalesar, Phillour, were not carried out, as the previous year's produce had not been disposed of. The boxwood cut in Bashahr was not exported to England, as a fall in the London prices rendered this inadvisable.

Insufficiency of supervision

27. Insufficiency of supervision (iv) accounted for the following deviations from the plans. Improvement cuttings in Futteh Jang, Rawalpindi ; the cutting out of inferior species over 400 areas in Khanni, Chamba ; and the plantation work in Diljabba, Jhelum, could not be carried out.

Other causes of deviation.

28. Among other causes of non-adherance to the plans of operations may be mentioned the following, *viz.* : failure of the anticipated crop of seed, scarcity of fodder crops, early cessation of the rains, failure of contractors to complete works.

Orders proposed to be issued.

29. The Divisional Officers have not in all cases sufficiently explained the reasons on account of which the plans of operations were not completely carried out ; and the Conservator proposes to issue an order that this is invariably to be done, and that works, not executed during the year, are either to be brought forward into the plan for the succeeding year, or to be formally abandoned under proper sanction.

CHAPTER III.—PROTECTION AND IMPROVEMENT.

1.—Establishment.

Mr. H. C. Hill was Officiating Conservator in the Punjab, until 5th March 1887, when he left for Burma, making over charge of the current duties of the office to Mr. E. S. Carr, Assistant Conservator. Major Bailey joined from the North-Western Provinces on the 19th March, and assumed the Conservatorship on that date.

Charge of the Forest Divisions was held as follows during the year :—

Divisions.	Officers.	From	To
Hazara ...	Mr. A. E. Wild	1st April ...	End of year.
Rawalpindi ...	Mr. W. Shakespear ...	1st April ...	30th April.
	„ J. L. Pigot ...	1st May ...	31st July.
	„ W. Shakespear	1st August ...	End of year.
Chamba ...	Mr. J. C. McDonell ...	1st April ...	End of year.
Kangra ...	Colonel W. Stenhouse ...	1st April ...	9th May.
	Mr. F. O. Lemarchand ...	10th May ..	End of year.
Kulu ...	Mr. F. O. Lemarchand ...	1st April ...	3rd May.
	„ E. A. Down ..	4th May ...	End of year.
Bashahr ...	Mr. G. G. Minniken ...	1st April ...	End of year.
Jhelum ...	Mr. E. Forrest ...	1st April ...	End of year.
Chenab ...	Mr. J. Copeland ...	1st April ...	28th May.
	„ A. L. McIntire ...	29th May ...	8th October.
	„ R. J. P. Pinder ...	9th October ...	2nd November.
	„ E. Murray ...	3rd November...	End of year.
Lahore ...	Mr. A. M. Reuther ...	1st April ...	End of year.
Multan .	Mr. C. F. Elliott ...	1st April ...	End of year.
Montgomery ...	Mr. E. Murray ...	1st April ...	31st July.
	„ C. F. Elliott ...	1st August ...	12th November.
	„ R. J. P. Pinder ...	13th November.	End of year.
Phillour ...	Mr. E. A. Down ...	1st April ...	17th April.
	„ E. S. Carr ...	18th April ...	15th May.
	Colonel W. Stenhouse ...	16th May ..	End of year.
Direction ..	Mr. E. S. Carr ...	1st April ...	17th April
		17th May ...	End of year.

Mr. D'Arcy made over charge of the Working Plans Branch of the Conservator's office to Mr. J. L. Pigot on the afternoon of 24th August 1886, and proceeded on two years furlough. Mr. L. G. Smith held charge of the Pangi forests till the setting in of the cold season, when he returned to Lahore to compile a Working Plan for them. He was employed in assisting the Deputy Commissioner, Gujrat, in the settlement of the Gujrat reserves, from the 1st March to the end of the year. Mr. Lace remained in Biluchistan throughout the year. Mr. Carr was in charge of the Direction Division, Conservator's office, throughout the year, except for one month, when he held charge of the Phillour Division. Mr. McIntire held charge of the Chenab Division till 8th October 1886, when he proceeded on examination leave for 19 days, at the termination of which he was deputed to examine the Kotgarh and Kotkhai forests, with a view to the collection of data for a Working Plan. Mr. Copeland held charge of the Chenab Division till 28th May 1886, when he proceeded on 3 months privilege leave, after which he was transferred to Burma.

I regret that, having held charge for a few days only at the end of the year, I am unable to offer any special remarks regarding the services rendered by these officers ; but I am convinced that they have, as a body, merited commendation by Government. Of the Sub-Assistant Conservators, Mr. Murray has held a Division throughout the year. Mr. C. F. Rossiter and Babu Ladha Singh are highly spoken of.

Rangers and permanent Protective Establishment.

30. The Rangers have, as a general rule, given satisfaction, eleven of them having been specially brought to the Conservator's notice. The men trained at the Forest School have done

very satisfactory work. The Foresters have also, generally speaking, done well; though several of them are reported incompetent. Duffadar Sunder Singh has been promoted to a forestership on Rs. 35 and has done fairly well, but is dissatisfied with his position; Lance-Daffadar Natha Singh is at the Central Forest school; Naik Jaimal Singh has given entire satisfaction to the Officer under whom he worked. Fourteen forest guards were dismissed; but this branch of the establishment gave more satisfaction than last year, except in Hazara, where many fines were inflicted.

Three apprentice foresters, *viz.*,—Sunder Dass, Devi Ditta and Atma Ram, joined from the Forest School; 3 apprentices and 1 forester were sent to the school in July 1886.

Office Establishment.

31. The office clerks and munshis have been, generally speaking, well reported on. Some of the Divisional Officers have remarked that extra work has been thrown upon their offices in consequence of their new duties in connection with unclassed State forests, previously managed by the Deputy Commissioner without their aid.

Temporary Establishment.

32. The permanent establishment, being too weak for the duties it has to perform, was supplemented throughout the year by a sanctioned temporary establishment.

Amalgamation and proposed re-organisation of forest Establishments.

33. Proposals regarding the amalgamation of the forest and district rakh establishments were submitted to the Financial Commissioner in December; but no orders have yet been received. The present scale of pay sanctioned for Rangers is quite insufficient to afford reasonable prospects to men who have passed through the Forest School; and it is now difficult to obtain qualified candidates for admission to the school. Mr. Hill's proposals, if sanctioned, would improve the position of these men; but a further suggestion on the subject has been recently made through the Financial Commissioner.

2.—General protection and Breaches of the Forest law.

Forest offences.

34. The following statement shows the nature of the forest offences taken into Court during the year, and compares the figures with those of 1885-86:—

	Number		Increase.	Decrease
	1885-86.	1886-87.	In 1886-87.	
1. Injury to the forests by fire	84	68	...	16
2. Unauthorized felling or appropriation of wood and other minor produce	642	659	17	...
3. Grazing without permission.	209	358	149	...
4. Other offences	179	214	35	...
Total ...	1,114	1,299	201	16

1,230 cases were actually disposed of, and convictions were obtained in 992 (or 81 per cent.) of them, as compared with 79 per cent. during the previous year. It is reported that, in the Rawalpindi Division, some decisions involving heavy punishments were reversed on appeal, which is much to be regretted. Mr. Shakespear urges that important cases should be brought before the Sadar Courts, and this would no doubt be advantageous if it could be managed. The number of cases pending in the Rampur-Bashahr Court is on the increase. Mr. Elliot remarks that this is the first year in which forest offences have been punished by imprisonment in the Multan Division, and that the deterrent effect has been good.

Offences compounded under Section 67 of the Act.

35. The number of cases compounded under Section 67 of the Forest Act is shown below :—

Division.	Number of cases.	Amount for which compounded.			Average per case.
		Rs.	A.	P.	Rs.
Rawalpindi	4	10	12	0	2·7
Jhelum	305	1,191	0	0	3·9
Lahore	5	20	8	0	4·1
Montgomery	2	2	0	0	1·0
Total ...	316	1,224	4	0	3·9

Cattle-trespass.

36. *Statement of animals impounded.*

Division.	Cattle and Buffaloes.	Sheep and goats.	Camels.	Horses and asses &c.	Total.	Total of 1885-86.
Hazara	1,027	2,470	...	...	3,497	1,368
Rawalpindi	3,391	6,983	300	28	10,702	12,259
Kangra	2,320	498	12	36	2,866	2,871
Jhelum	883	1,451	19	13	2,366	2,875
Chenab	2,896	2,096	102	60	5,154	4,703
Lahore	4,686	2,863	186	118	7,853	9,067
Multan	2,585	414	231	52	3,282	3,771
Montgomery	1,839	617	275	32	2,763	5,487
Phillour	536	553	9	37	1,135	400
Total ...	20,163	17,945	1,134	376	39,618	42,801

The total number impounded was less than in 1885-86. The numbers in Hazara were increased by the arrival in Khanpur of Gujars with large flocks of goats and sheep. A great many camels, goats and sheep trespassed in the reserved forests of the Rawalpindi Division. Complaints are received from Kangra that Gujars, as well as people possessing ample grazing grounds of their own, permit their cattle to enter the State forests; and that the villages round the Bagarian and Mullanwal plantations, who have the right of free grazing in them, neglected to employ herdsmen, and thus allowed their cattle to stray into the closed compartments. An increase of cattle-trespass in the Chenab Division is due to the closing of additional areas. The question how far it may be possible to gradually fence in all permanently constituted forests which are liable to inroads by cattle, will be considered.

3.—Forest Fires.

General remarks

37. The statement in Form No. 51 and that here given, show, with as much accuracy as is attainable, the areas that were burnt.

Abstract showing areas burnt and unburnt.

	Reserves.	Protected Forests	Unclassed State Forests	Total.	Grand Total.	Percentage of entire area
Areas of which the protection was attempted, but which were burnt, (Form No 51)	55,232	1,106	2,467	58,805		1·75
Other areas burnt ...	20,627	12,938	42,458	76,023	...	2 25
Total area burnt ...	75,859	14,044	44,925	...	1,34,828	4 00
Areas successfully protected, (Form No 51)	1,20,835	4,274	55,539	1,80,648	...	5 40
Other areas which escaped burning .	7,94,250	2,22,903	18,77,308	28,94,461	...	86 98
Total area unburnt ...	9,15,085	2,27,177	19,32,847	...	30,75,109	92 38
Area regarding which information is incomplete ...	1,944	...	1,16,367	...	1,18,311	3 62
Grand total, area of forests of all classes, (Form No 49) ...	9,92,888	2,41,221	20,94,139	...	33,28,248	100

It is seen that special measures, usually consisting merely in the appointment of extra watchers, were taken to protect 2,39,453 acres, or 7·15% of the entire area of forests of all classes; and that 1,80,648 acres, equal to 75% of these specially protected forests, and equal to 5·4% of the total forest area, were actually saved from burning. It is also seen that, in addition to the forests burnt in spite of the special precautions taken to protect them, fires spread over a further area of 76,023 acres, so that the total area burnt amounted to 1,34,828 acres, or 4% of the entire area of the forests shown in form No. 49. 16,717 acres only were burnt last year. The following figures show the extent of forests burnt in each Division, during each of the two years :—

Divisions	No of Fires		Area burnt (acres)	
	1885-86	1886-87	1885-86	1886-87
Hazara	11	103	4,460	27,651
Rawalpindi	15	59	265	49,841
Chamba	7	16	35	523
Kangra	3	25	3	1,543
Kulu	67	92	3,019	40,407
Bashahr	9	7	Not given	640
Jhelum	...	3	...	9
Chenab	..	7	..	133
Lahore	9	27	25	1,125
Multan	21	29	8,410	2,61[illegible]
Montgomery	...	...	...	...
Phillour	3	20	500	9,403
Kotgarh and Kot Khai		4	...	936
Total ..	145	392	16,717	1,34,828

The year 1886-87 was a disastrous one; the excessive and continued drought having caused a number of forest fires, probably without precedent in the annals of the Punjab Forest Department. But seeing that, even under these circumstances, only 4% of the forests were burnt, it must still be said that the

Province enjoys an exceptional immunity from this scourge. The principal cause of the unusual number and extent of the conflagrations, was undoubtedly the exceptional inflammability of the undergrowth and fallen leaves, due to the prolonged absence of rain; the drought tended, however, in some parts of the plains, to reduce the number of fires, as so little grass was produced, that there was hardly anything to burn. But there is also no doubt that a great deal of the damage was due to the careless manner in which the villagers, in the neighbourhood of the forests, burned the rubbish and rough standing grass on their fields and waste lands. Legislation on this subject is badly needed; for except where the Rules of 1855 are in force, there appears to be no means of dealing with such cases. Even where the forests are reserved under Chapter II of the Forest Act, it is but rarely that the offenders can be punished, owing to the difficulty experienced in obtaining a conviction against any individual; and it is remarkable that more power exists to deal with fires under the Rules of 1855, than is given by the most stringent of the provisions contained in the Forest Act. The difficulties in the way of fire protection in Kaghan and Siran seem to call for some special measures; and the Raja of Chamba should be requested to take effectual means to prevent fires, originating in his territory, from spreading into the Kangra forests. Fire-lines for the protection of chil forests were again found ineffectual.

Details for Divisions.

38. *Hazara.*—The fires were especially destructive in Khanpur, in spite of the strenuous exertions of the Revenue and Police officials. They broke out in the chil forests, and extended outside them into the broad-leaved forests. Disputes arose over the earlier of the fires; and incendiarism is strongly suspected, though it cannot be proved. In Kaghan and Siran, it is said that the people seem determined to get a fresh growth of grass for their cattle, at any cost; and that the application of the law does not appear to be effectual against them.

Rawalpindi.—This Division has the heaviest record, *viz.* 49,841 acres burnt. In some instances the fire crept over from Hazara; but in two cases incendiarism was proved. The principal cause of the destructive fires which occurred, was, however, the reckless burning of rubbish and waste land by the villagers. It is said that fires are sometimes lighted by people who desire thereby to get others into trouble. The great fire which approached Murree, originated on the banks of the Jhelum; and is believed to have been caused by sparks blown across the river from Kashmir.

Chamba—There was only one large fire, due again to the careless burning of grass lands.

Kangra.—The Divisional Officer complains that many of the fires which entered his forests originated in Chamba and crept across the boundary; but some were caused by travellers carrying torches along the roads during the night, in the hot weather; and several were lighted by villagers when engaged in collecting honey. The older chil trees are much injured by fire, and do not give seed for several years after being severely burnt.

Kulu.—Of the large area burnt, over 26,000 acres were on grass land without trees, and on another area of 9,000 acres but little damage was done.

Bashahr.—The fires were almost entirely due to the burning of grass lands without proper care and forethought. The people are very careless, but are equally ready to assist in putting out the flames. Mr. Minniken is endeavouring to introduce some system into the annual burning of the grazing grounds.

Jhelum.—Only 9 acres were burnt.

Chenab.—The damage done was slight; 74 acres were burnt in reserve Nath, while a pig-sticking party was driving the grass.

Lahore.—A good deal of damage was done. The fires were chiefly caused by sparks from the Railway engines.

Multan.—The fires occurred principally in the Alipur Tahsil of the Muzaffargarh District. They spread into the forests from adjoining village lands.

Montgomery.—There were no fires.

Phillour.—The Kalesar forest was burnt.

Simla District.—936 acres were burnt in Kotgarh and Kot Khai.

4.—Grazing and Fencing.

General remarks.

39. The failure of the winter and spring rains caused the season to be a bad one for cattle. The following statement shows the areas closed in square miles :—

Divisions.	Closed to all classes of animals throughout the year.		Closed to all classes of animals for a part of the year.		Closed against camels, goats and sheep.		Remarks.
	1885-86.	1886-87.	1885-86.	1886-87.	1885-86.	1886-87.	
Hazara ...	169	169	3	...	172	169	
Rawalpindi ...	62	61	17	18	90	160	
Chamba ...	61	61	...	...	61	61	
Kangra ...	56	59	5	6	63	59	
Kulu ..	15	3	...	....	15*	3	* The 15 square miles were erroneously reported last year.
Bashahr ...	33	33	...	...	33	33	
Jhelum ...	22	29	...	...	74	75	
Chenab ...	18	53	49	67	191	202	
Lahore ...	22	70	47	37	149	187	
Multan ...	45	81	130	102	175	160	
Montgomery ..	4	52	87	36	110	102	
Phillour ...	6	20	...	1	6	21	
Total ...	513	691	338	267	1,139	1,232	

The areas under the third head include those shown under the first and second heads, so far as they are applicable. It will be observed that the area entirely closed has been raised from 513 to 691 square miles; while the area partly closed has been reduced from 338 to 267 square miles. The area closed against browsers has been increased from 1,139 to 1,232 square miles. It is said that grazing has in practice to be permitted in some parts of the Chamba forests which are unburdened with rights. The Forest Department has no objection to make such of its forests as are in a condition to bear it, available to meet the *bonâ fide* grazing requirements of the people, even when admission to them cannot be claimed as a matter of right. Considering the vast areas of grass lands which are open to the people in the Hamirpur Tahsil of the Kangra District and the comparatively small number of cattle they possess, it ought to be possible to close much larger areas than are closed at present. The small area of forest that it has been possible to close in Kulu is very remarkable. 8,225 maunds of hay were cut and stacked in the Jhelum, Chenab and Lahore Divisions: and the result of this experiment will be fully reported. Some fencing was put up in most of the divisions.

Details for divisions.

40. *Hazara.*—2,912 acres in Kaghan and Siran, granted at Settlement for the exercise of grazing rights, have continued closed on account of the occurrence of fires.

Rawalpindi.—70 additional square miles were closed against camels, goats and sheep. Mr. Shakespear reports that the yield of grass from the Military rakhs was 42,000 maunds, as compared with 27,000 maunds last year; and that the yield is insufficient to feed the horses.

Chamba.—Mr. McDonell remarks that grazing has in practice to be permitted in some parts of forests which are unburdened with rights; and that this is due to defects in the Settlement, which did not sufficiently provide for the requirements of the people, some of whose flocks were absent on the Alpine pastures. Some fencing was put up in Kalatop and Bakloh.

Kangra.—The people appear to have very extensive grazing grounds of their own. Mr. Lemarchand made an attempt to cut and store hay; but at the season when the grass is fit to cut, the people are engaged in agriculture, and labor is with difficulty procurable. The Gujars who bring down their buffaloes

to Nurpur for the winter grazing, pay fees to the zamindars of certain villages, on whose lands they are permitted to keep their cattle. The Gaddis from Kulu, Lahoul and Chamba graze their flocks during the winter months over the *shamilat* forests; from 185,000 to 190,000 head are said to have grazed during the year.

Kulu.—A very small area is closed, amounting to only 3 square miles; 15 square miles were erroneously reported last year. About 8½ miles of thorn fencing were put up.

Bashahr.—The grazing question presents no difficulties in Bashahr.

Jhelum.—An additional area of 7 square miles was closed entirely. 4,000 maunds of hay were stacked in the Jhelum reserves; there is a good demand for it in the Pind Dadan Khan Tahsil, but none in the Jhelum Tahsil. On account of the drought and consequent failure of crops, the Deputy Commissioner of Shahpur permitted the lopping of trees in the Khushab Salt Range.

Chenab.—The area absolutely closed was increased from 35 (erroneously stated last year to be 18) to 53 square miles; that closed to all animals for a part of the year only, was increased by 18 square miles; and the area closed to camels, sheep and goats only, by 11 square miles. The winter and spring rains failed, and cattle suffered much in consequence. 1,000 maunds of hay were stored in the Kikranwali and Chichra reserves; 18 miles of fencing were constructed round Deowal.

Lahore.—The area closed entirely was increased by 48 square miles, while that partially closed was decreased by 10 square miles. The area closed against camels, goats and sheep was increased from 149 to 187 square miles. 698 acres were specially closed and partly fenced as fuel and fodder reserves; 3,225 maunds of grass were cut and stacked, the cost for fencing being Rs. 347 and for grass cutting and stacking Rs. 432.

Multan.—The area closed entirely was increased by 36 square miles; that partially closed was decreased by 28 square miles; the area closed against camels, sheep and goats was 160 square miles.

Montgomery.—The areas entirely closed were increased by 48 square miles, while those opened for a part of the year only were reduced by 51 square miles. The area closed to camels, goats and sheep was reduced by 8 square miles. Owing to the excessive drought, some of the reserves were opened in November for 3 months. There was no grass in the district rakhs, and cattle owners had to take away their herds to other parts of the country.

Phillour.—14 additional square miles were entirely closed, principally in Kalesar. 15 square miles were added to the area closed against browsers. Some fences were put up at Kalesar, Dagshai and Phillour.

5.—Natural re-production.

General remarks.

41. On the higher mountains, natural re-production is, generally speaking, satisfactory; and this is also the case in those parts of the lower hills where fire and grazing can be excluded. The orders to clear away shrubs and grasses on contour bands, during the rainy season, with a view to relieve the seedlings from suppression, were not received in time to admit of their being carried out last year; but the suggestion will now be put into practice. There is little doubt that, in the above mentioned regions, under skilful treatment and strict protection, regeneration by natural means can, as a rule, be secured, either by selection fellings, or by some method based on regeneration fellings, such as is suggested in the last review by the Government of India. But, in the more valuable forests, it may not always pay to incur the delay, and risk of failure, which this system involves; and where experience has shown that a sufficient natural growth cannot certainly be obtained within a reasonable time, it will, when funds can be made available, be desirable to re-stock the ground artificially. With the above object in view, nurseries should be established in convenient and suitable situations; and, where this has not already been done, the most successful system of sowing and planting, at different elevations, and under other various conditions, should be determined, by experiments conducted in each forest region. In the hilly rakhs of

the Jhelum district, the fellings of 1879-80 have not resulted in a crop of either coppice shoots or seedlings; but the ground has become covered with grass. The reports from the "bar" rakhs of the Chenab, Lahore, Multan and Montgomery divisions are extremely discouraging; and except in Kot-Lakhpat, Lahore, seedlings have not appeared on the fenced experimental plots. But it is a satisfaction to be able to report that, in the Bhera rakhs, the jhand and karil stools have coppiced fairly.

Details for Divisions.

42. *Hazara.*—The production of deodar, silver fir, horse-chestnut, and elm seed was abundant; there was a fair amount of blue-pine and *Pinus longifolia* seed, but very little of oak and maple. As a general rule, very few seedlings or saplings are to be found in the silver fir forests; but there are many seedlings of broad-leaved species, and there seems a probability of the latter getting the upper hand, unless measures are taken to prevent this; during the months of July and August, there is often a dense herbaceous growth on the ground, which probably interferes with the development of the fir. The blue pine always re-produces itself profusely; and the same may be said of *Pinus longifolia* in the forests around the Pakli plain, and in Batrassi. The exclusion of fire from these areas is all that is necessary in order to secure their regeneration.

Kulu.—The growth of natural deodar seedlings, following on felling operations, is said to be sufficient.

Bashahr.—The natural re-production of deodar is satisfactory. In some places the blue pine has a tendency to interfere with the growth of the more valuable species, and care must be taken to check this. Deodar seedlings are now coming up in some of the clearances made many years ago by traders. Young box-wood seedlings have appeared in Neogli, since the fellings took place.

Chamba.—Deodar seed was fairly plentiful, and the seedlings of former years have made good progress, where they were not choked by herbage. Mr. McDonell remarks that the grassy blanks in Kaletra are, under immunity from fires, gradually filling up with naturally sown deodar seedlings; and the villagers say they have noticed the occurrence of the same thing in many other places, since the management has been in the hands of the Forest Department. The natural growth of deodar in Pangi is reported by Mr. Smith to be most satisfactory.

Kangra.—The natural reproduction of *Pinus longifolia*, as well as of sal and other trees, in areas closed against fires and grazing, makes good progress. In the Hamirpur forests, area 27 square miles, nearly the whole of which are open to grazing, there is however no young growth; all that existed in 1883 was destroyed by fire, which injured the larger trees so much that they bore no seed the following year. A few of the trees seeded in 1885. In the open forests seedlings are not plentiful, except at long distances from hamlets, or in secluded ravines. The growth of bamboos in Karnpur and Bindraban, as well as elsewhere, is very good. The two last named reserves are closed during the rains, after which the new shoots of the year are out of danger.

Rawalpindi.—The growth of naturally sown seedlings makes good progress in the pine forests, on favorable aspects, where fires and grazing are excluded, and where the mass of fallen needles is not too dense. Owing to the extent to which grazing is practised in the oak forests, but few seedlings are to be found in them; but this tree coppices well up to the age of 30 to 35 years, when it has a girth of from 2′ to 3′. In the lower hardwood forests, the number of self-sown seedlings is very limited.

Phillour.—Young *Pinus longifolia* are springing up at Dagshai, on the border of the small forest of that species. At Kalesar, the natural growth of sal is good, on well drained ground; and coppice shoots of this species grow to a height of 10′ in two years; but they suffer from frost. In the Ludhiana and Phillour plantations, there is a good natural growth of sissu, kikar, and other trees, where fellings have taken place.

Jhelum.—The reports from the Salt Range are eminently unsatisfactory. The areas felled over in 1879-80, though closed, have not produced any young growth. Probably the trees were too old to coppice; and as the ground had

been grazed over for years, it was not in a fit state to allow of the germination of seed, which moreover has been very scantily produced during the last few years. The closure has, however, had the good effect of producing a crop of grass. Matters are a little more hopeful in some of the Pind Dadan Khan reserves.

Chenab.—Generally speaking, there is a complete absence of natural growth on the "bar" rakhs, including the fenced five-acre plots in Dhaban and Khingranwali. The sissu are progressing in Chichra. Kikranwali was flooded for some time during the rains, and last year's seedlings were consequently killed. Very few last year's seedlings were found in Pabbi; but the older ones are progressing favorably. There are no new seedlings in the five-acre plot in Minargarh. The coppice growth in the Bhera rakhs is said to be satisfactory, the young shoots of jhand springing up rapidly at first; but, after a few months, their progress becomes slower. The jhand and karil coppice, the result of fellings in Ishar in 1885-86, has been injured by frost; but this is not the case in Deowal, which was felled over in 1886-87, and the coppice in which is making good progress.

Lahore.—Mr. Reuther reports that the sample area closed in Kot-Lakhpat, having been burnt in February 1887, all trees and shrubs were cut back, and there is now nothing on the ground but coppice shoots and grass. Before the burning took place, there was an excellent crop of fodder grass, among which were seen numerous mulberry and sissu seedlings. No material improvement is noticeable in Jalleki, where seedlings have not appeared; but the last two seasons have been unfavorable. In Changa Manga, the experimental plot has an improved appearance, but there are no seedlings; the intended exclusion of cattle was, however, not efficiently carried out. The coppice has failed in parts of Changa Manga, and the causes of failure are under investigation.

Multan.—The compartments cut over by contractors coppiced well; but, on the high ground, as many as 30 per cent. of the stools failed to throw out shoots. A very fine crop of self-sown jhand and kikar seedlings sprang up after the fire in Rakh Makhan Bela. Mr. Elliott has not reported on the areas experimentally closed.

Montgomery.—The season was a very unfavourable one. On the areas felled over by contractors, 75 per cent. of the farash stools coppiced, but only 10 per cent. of the jhand threw up shoots. There is a fair show of grass on the experimental plots.

6.—Artificial re-production.

General remarks.

43. The abstract given at the foot of Form 52 shows concisely the net results obtained under the head of artificial reproduction during the year. It will be seen that an area of 1,400¾ acres was planted or sown, at a cost of Rs. 38,322; but 226 acres were struck off as failures, 36 acres were lost by river action, and 1,681 acres were struck off owing to previous errors of measurement or estimate of area. The total area of plantations is thus reduced from 18,540 to 17,997¾ acres. The orders given in the review by the Government of India regarding the preparation of the soil under seed-bearing deodar trees, were received too late for execution; but the experiment will be tried during the current year. The work of the year has, generally speaking, been thus far successful; but the ultimate results to be obtained in Khanpur (Hazara), and in Jhelum and Montgomery, are open to much doubt, on account of the prolonged failure of the rainfall.

Details of Divisions.

44. *Hazara.*—381 acres were sown, and 29 acres were planted, principally in the Khanpur range. The sowings in Khanpur were successful, but the plants put out suffered from want of rain. The work at Dungagali was badly done; and the plants at Changlagally and Kunjagally suffered from hail and snow. It is feared that the Khanpur plantations will fail, on account of the unusual drought.

Chamba.—Considerable progress was made in planting and sowing. About 2,14,500 plants, mostly deodar, were put out on 175½ acres, at a cost of Rs. 702. 500 deodar plants were put out in the snow in Bohar, as an experiment, to fill up blanks; they were all alive at the end of the year. Additional nurseries were prepared, and there is an ample stock of plants for this year's work

20,050 patches of deodar were sown in Kainthli, at a cost of Rs. 62. Of the 10,000 patches sown at Kalatop in 1885, 6,000 contain from 3 to 10 healthy plants each. The 4 acres sown in Khanni were cleared of inferior species and fenced. An area of 4 acres in Pangi was sown with deodar in patches, and two nurseries were prepared.

Kangra.—*Pinus longifolia* seed having failed, the sowings were much restricted. In the Tatal reserve, Nurpur, 4 acres were sown in patches, lines for which were cleared through the jungle; the brushwood and thorns, cut from the lines, were heaped over the patches, which were thus protected, to some extent, from the attacks of wild animals. In the Dera range, 3,819 bamboo roots were put out during the rains, and 70 per cent. of them are said to be thriving.

Kulu.—34,411 deodar plants were put out, on 28½ acres, at an average cost per acre of Rs. 5-12; 49¼ acres were sown with deodar, in 60,013 patches, at an average cost per acre of Rs. 4-2-3. 25 acres were sown broadcast in Latura.

Bashahr.—84 acres were sown and planted up, and over one acre of nurseries were prepared and sown. Mr. Minniken remarks that deodar, when associated with the Holm oak or the edible pine, readily pierces their cover; and that these two trees might, in parts of Kanawar, be used as nurses for it.

Jhelum.—17 acres of new plantations were made, and 14 acres of failures were resown. The winter and spring rains having failed, the results are doubtful.

Chenab.—The only work of importance was that in the Pabbi reserve, regarding which a complete and interesting report has been submitted by Mr. McIntire. 30 acres in the Godam Kas, and 90 acres in the Dokassa basin, were operated on, the system being the same as that previously reported. The total expenditure was Rs. 1,219. The following extracts from Mr. McIntire's report are given :—

Bands.

"Altogether 68 new *bands* were constructed in the Godam Kas and Dokassa basins, and 152 old ones were repaired, at a cost of Rs. 140. Besides the above, one masonry *band* was constructed in the Dokassa Nulla, at a cost of Rs. 25.

These *bands* were first merely constructed of loose stone work, behind which loose earth was heaped, the height of the *bands* above the bottom of the nallahs varying from 3 to 8 feet, and the foundations going one to two feet below the level of the soil. In several of these *bands*, however, situated in nallahs passing off large quantities of rain water, the earth mounds were washed away through the interstices of the loose stone work. I consequently had the tops of all the *bands* covered with mortar, and had the earth mounds better beaten down, and this proved everywhere, with the exception of two or three *bands*, (the repairing of which I was unable to superintend personally), successful. Some of these *bands* had pools of water standing behind them more than a month after any rain had fallen, and, with attention till the earth mounds got properly set, should stand for a long time, and should prove of great service in inducing more vigorous vegetation."

Results of sowing.

"For the first ten days after the commencement of work, no rain fell; but after this there were fair rainfalls every three or four days, so that, with the exception of the sowings on the four or five acres last operated on, germination of the kikar and phulai seed both on the ridges and inside the trenches was perfect, and that of the sanatha seed was very fair. Only a small percentage of the shisham, *Prosopis glandulosa*, and prickly pear, however, appear to have germinated. When last I inspected these sowings, *viz.*, on the 8th October, just after a heavy hail-storm, I found that on the dryer and more exposed situations, comprising about a fifth of the total area operated on, the larger amount of the seedlings had withered; but even in these situations an ample quantity of seedlings to ensure the ultimate stocking of these areas, supposing that no more died off, were surviving; whilst on the remaining area operated on, with the exception of a few kikar seedlings, destroyed through their roots being eaten by the *Cereambix* larva, hardly a seedling had died. Of the prickly pear plants, I found only about a dozen surviving, whilst of the shisham transplants, of which altogether 400 had been planted out behind the *bands*, only 30 per cent. had been successful. The jhand sowings appeared to have been entirely unsuccessful; but these were only effected just before the close of the rains."

Mr. McIntire adds that, with certain exceptions, including the broadcast sowings of 1885-86 in "Sher Ali's land," the plantation has maintained itself, and is beginning to make a decided show. He, however, fears the effect of the failure of the winter and spring rains.

Lahore.—The expenditure on the Changa Manga plantation was Rs. 20,092, of which Rs. 13,800 were paid on account of water to the Canal Department. Cultural operations were undertaken in Shahdera, Jhok, Kot-Lakhpat and Dhig, 109 acres of new ground being planted or sown, and 97 acres of old plantations being re-sown. 21 acres of burnt coppice were cut back, and 30,000 willow and farash cuttings were put out, in depressions where water usually lodges.

Multan.—46 acres were sown, and the result has been, generally speaking, satisfactory. Plough lines were successfully stocked with the jhand in Vinoi.

Montgomery.—8 acres were sown with jhand, but as rain did not fall, the seed had failed to germinate at the close of the year. It may do so later on.

Phillour.—At Dagshai 100 acres were sown with deodar and blue pine; and 89 acres with *Pinus longifolia* and oak (*Quercus incana*).

Blanks were filled up at Sabathu and Phillour.

7.—Early thinnings, Removal of inferior species, Cutting of creepers, Clearing of interior lines, &c.

Details for Divisions.

45. In *Chamba* the removal of inferior species was carried out over deodar, in the manner prescribed in the Working Plan, the area dealt with being 1,871 acres. In *Multan* two compartment lines in the Vinoi reserves were cleared; the reserves of the Lodhran range have been divided into compartments; lines were laid out and partially cut in Jalwala, Muzaffargarh; lines were also laid out and cut in Makhan Bela. In *Kulu*, 50 acres of the Sandhar forest were cleared of creepers and injurious undergrowth. In the lower forests of the *Rawalpindi* Division, inferior species, such as sanatha, were cut out, where it was possible to dispose of them, in order to favor the growth of more valuable kinds. A few creepers were cut in the *Hazara* division.

8.—Experiments and Exotic trees.

Seeds from Cape Colony

46. Sneeze-wood seed did not germinate either in Hazara, Chamba, or Phillour; neither did *Pteroxylon utile* at Changa Manga.

Eucalypti.

47. Of the eucalyptus trees growing at Sabathu, 106 are 25′ high and 1 in girth, while 4 are 40′ high; several of those growing at Lahore and at Changa Manga have flowered, and promise a crop of seed. *E. citriodora* seeded at Lahore, and a large crop of seedlings was obtained. 288 plants of various species, raised in pots at Abbottabad, have been planted out in the forests with varying success; others planted at Barakao on the Rawalpindi-Murree road, succumbed to heat and white ants. Those put out at Goragally were killed by snow and by cattle; but 100 plants at Bakloh are growing well. *E. gummii* and *E. coccifera* germinated at Abbottabad, but all the plants died. Those sown in boxes at Chamba survived; 3 of them, planted out in the garden, being now 2′ high. Of the *E. arnigera* sown at Abbottabad, only two are alive. *E. globulus* and *E. longifolia* continue to flourish in the Lee Garden, Kulu. *E. obliqua*, *hamastoma*, *corymbosa*, and *tereticornus*, failed at Changa Manga; but 212 plants of 6 species, *viz.*, *E. botryoides*, *crebra*, *fibrosa*, *pilularis*, *resinifera* and *viminalis* will be put out there in September.

Carob

48. Of the carob sown at Pandain, Kangra, in 1884, 53 plants survived, the largest being 4′ high. Those sown in Gandhala plantation, Jhelum, in 1884-85, have done well; but only 10 of the 30 planted in Pabbi in 1885-86 are alive, and they have had to be constantly watered. The seeds sown in Vinoi, Multan, failed for want of rain; but about 100 plants still exist at the tail of the rajbaha in Makhdumpur. In the Phillour Division only 209 transplants survived; but those left in the nursery are doing well.

Acacia melanoxylon

49. The six trees at Bakloh still survive.

Alburus aculeatus

50. The hedge-plant has not done well either at Bakloh or Kalatop; hundreds of plants survive but they make no progress.

Box.

51. The nurseries of boxwood at Kainthli have been carefully looked after, and 230 plants are still alive.

The Lee Garden, Kulu.

52. In addition to the two species of eucalyptus above mentioned, *Catalpa bignonioides*, *Cupressus govinsearia*, C. *marocarpa* and *Pinus coulteris* appear to flourish well in the Lee Garden.

Spanish chestnut.

53. Five Spanish chestnut trees at Kalatop are doing well, but have not yet flowered. The species continues to flourish in Bashahr, and an endeavour has been made to establish nurseries and distribute plants throughout the valley. The trees at Manali, Kulu, fruited very well in October, the fruit being more plentiful and of better quality than that previously obtained.

Other European trees

54. The species noted in previous reports continue to prosper.

Atriplex nummularia.

55. Seeds of the salt bush were sown in July at Changa Manga, on carefully prepared soil, both *kallar*, watered and unwatered, and soil of good quality, watered and unwatered. All four sowings failed entirely. Seed was also sown in flower pots containing good soil, which was regularly watered; these succeeded well, and the plants will be put out. Mr. Reuther remarks as follows:—"To ensure germination, regular and abundant watering is essential; and this conclusion is confirmed by experience gained in the Carob plantation at Lahore, where the seedlings raised in 1886-87 are flourishing, not only in flower pots, but also in patches of bad *kallar* soil, which is regularly and abundantly watered. The plants have twice produced an abundant seed crop, from which seedlings have been raised." The salt bush failed for want of rain in the Vinoi reserve, Multan, and also at the tail of the rajbaha in Makhdumpur, but is doing well at the forester's head-quarters.

Haloxylon ammodendron.

56. *Sacsoul* was tried in numerous places, but failed to germinate.

Mahogany.

57. Mahogany was sown in pots and beds at Changa Manga, but only 20 seeds germinated, and only 5 plants, from 3″ to 5″ high, survive. There is a plant 3′ high in the Carob plantation at Lahore. Some seed was also sown at Phillour; a few germinated but the plants all died.

Other species.

58. The edible pine *(Pinus Gerardiana)* and *Platanus orientalis* have been successfully raised from seed at Abbottabad. The attempt to raise *Dendrocalamus strictus* at Changa Manga failed, as the young plants were uprooted by wild pigs, to destroy which measures have been undertaken. *Dalbergia latifolia* made fair progress there.

9.—Communications and Buildings.

Summary of work and expenditure.

59. The expenditure incurred under the head of communications and buildings was as follows:—

	Rs.	A.	P.
Communications	11,788	4	7
Buildings	6,780	4	0
Other works	24	0	6
Total ...	18,592	9	1

The necessary repairs of existing roads and buildings were executed, and the forests were further opened out by the construction of the following new works, *viz.*—Over 80 miles of forest roads and paths, 2 large wooden bridges, 6 timber slides, 1 rest-house, 2 offices, 13 huts for establishment, a small timber shed, and a water mill.

Detail for Divisions.

60. *Hazara.*—8½ miles of inspection paths were made in Khanpur, Dungagali and Kaghan.

Chamba.—Much progress has been made in Chamba; where about 11 miles of roads, and 19 miles of paths, have been constructed, thus opening out the forests and improving their value. A rest-house was built at Chatri, and forester's and guards' winter quarters at Surkhigally; a new hut and office were made at the Shahdera depôt on the Ravi.

Kangra.—An inspection path, 2 miles long, was made; and a forester's hut was built at Chitrál.

Kulu.—Over 15 miles of new roads and paths were constructed; and Rs. 500 were paid towards the construction of a road, by the Revenue Department, on the right bank of the Parbatti. A forest guard's hut was built at Choai.

Bashahr.—19½ miles of new roads and paths were made; two large bridges were built, one over the Sutlej and the other over the Baspa; six timber slides were constructed, aggregating 2,359 feet in length; 3 huts, a new office at Kilba, a timber shed at Kubban, and a water mill, were also erected.

Jhelum.—Nearly 5 miles of new inspection paths were made.

Chenab.—Two huts were erected at the Jhikar depôt.

Lahore.—New compartment roads were made in Shahdera.

Multan.—Three compartment roads and a guard's house were made.

Phillour.—Three inspection paths, aggregating 1¼ miles in length, were made at Dagshai, and three huts were built for forest and depôt establishments.

CHAPTER IV.—YIELD AND WORKING.

Summary of Produce removed from the Forests.

Summary of removals from the forests.

61. The total outturn of the year, in timber and firewood, expressed in cubic feet, compares as follows with that of 1885-86:—

	1886-87	1885-86
Removed by Government Agency	32,86,656	28,81,296
Do Purchasers	79,41,370	67,22,491
Do as free-grants	1,01,18,583	2,36,016
Do by right-holders ...	13,05,625	1,88,480
Total ...	2,26,52,234	10,28,283

showing an increase of about 1¼ lakhs of cubic feet, which will be accounted for below.

A summary of the outturn in *minor* produce, can only be given in its money value, which was as follows:—

	1886-87	1885-86
	Rs.	Rs
Removed by Government Agency ...	14,092	15,190
Do Purchasers	1,51,207	1,57,220
Do. as free-grants	10,301	240
Do by right-holders	741	433
Total ...	1,76,341	1,73,083

1.—Departmental Operations.

Selection fellings (Form No. 53).

62. 11,804 trees, of which 7,606 were deodar, and 882 boxwood, were felled during the year, as selection fellings; the number last year was 7,540. The principal increase was in Chamba, where a large number of deodar trees was cut for conversion, during the current year, into sleepers; and in Rawalpindi, where a greater number than usual of oak and other trees were felled to supply the Murree Brewery with firewood and charcoal.

Removals from the forest (Forms No 54 and 55)

63. The removals of *timber* and *firewood* from the forests by departmental agency were increased by 4,05,360 cubic feet, as compared with the figures of 1885-86. The value of

minor produce was less by about Rs. 1,100 than that removed last year. The remarks in the next paragraph are sufficiently applicable, to render a separate explanation of this difference unnecessary.

Account of timber and other produce (Form No. 56).

64. The abstracts on the statement (No. 56) show the transactions of the year. The opening balance of *timber* was 99,007 cubic feet; and the principal transactions were as follows, *viz* :—

	1886-87.	1885-86.
	Cubic feet.	*Cubic feet.*
Received from the forest in depôts ...	... 8,12,585	5,98,829
Removed by purchasers from depôts ...	... 8,24,211	6,26,924
Sold locally	... 42,478	15,039

The balance at the close of the year, which includes a large quantity of box wood, was 82,759 cubic feet. Under the head of *firewood and charcoal* the receipts of firewood into depôts from the forest were about 15¾ lakhs of cubic feet (stacked) as compared with 10½ lakhs last year; while the removals from depôts by purchasers were about 12½ lakhs, as compared with 8¼ lakhs. The firewood sold locally was about the same in quantity as in 1885-86, *viz*: 4¼ lakhs of cubic feet. The transactions in charcoal do not seem to call for special remarks. The number of *bamboos* brought to depôt and sold was about 7½ lakhs as compared with 8¼ lakhs last year. The receipts of *shingles* were nearly three lakhs, the sales being less than the receipts by about 35,000. The increase in the quantity of *timber* received in depôts is due principally to favorable floods on the Sutlej, Ravi and Chenab; but also to sleeper works having been under taken on an unusually large scale in Chamba, and to the resumption of timber operations in Pangi. A good many of the Bashahr sleepers were carried down the Sutlej past Rupar. The demand for timber was above the average, there being a ready sale at depôts for timber of most kinds, but specially for railway sleepers. Local sales were also increased in most of the divisions; in Chamba a considerable quantity of timber was required for the building of the new barracks at Bakloh. There was a large increase in the amount of *firewood* removed from the Lahore division, principally for consumption on the railway. The *minor produce* consisted principally of bamboos, (of which the quantity was less by about 1 lakh than that removed last year), and hay, of which 664 maunds were cut; that sold in Multan was of good quality, and there was a brisk demand for it.

2.—Removal of produce by purchasers.

Removals from the forest. (Forms No. 54 and 55).

65. The removals of *timber* and *firewood* from the forests by purchasers, were increased by 12,18,879 cubic feet, as compared with last year. Under the head of *minor produce*, the sales amounted to about Rs. 6,000 less than in 1885-86. These differences are accounted for by an increase of about 28 lakhs of cubic feet (stacked) of fuel, supplied to the Railway in the Montgomery and Multan Divisions; but there was a corresponding decrease of about 8 lakhs in Lahore, and of about 6 lakhs in Rawalpindi. The reduction in *minor produce* is mainly due to diminished receipts from grazing fees.

3.—Produce given in free grants and removed by Right-holders.

Removals from the forest

66. Produce given in the form of free-grants is shown in form No. 54 separately from that removed by right-holders. But as a sharp distinction has not, it is believed, in all cases, been drawn between the two classes, it is thought better to deal with them here together.

The amount of *timber* and *firewood* was increased from 4,24,496 cubic feet in 1885-86, to 114,24,208 cubic feet in 1886-87; and the value of *minor produce* was increased by over Rs. 10,000. The large increase in the amount of timber and firewood is thus accounted for. About 102 lakhs of cubic feet of firewood,

given in the Murree and Kahuta tahsils of the Rawalpindi district, during 1885-86, were omitted from the returns of that year. In the same division, the gifts of timber in the form of trees and poles were increased by about 2½ lakhs of cubic feet. The Raja of Chamba granted about 4½ lakhs of cubic feet from the unreserved forests; and the grants in Bashahr exceeded those in 1885-86 by about 1 lakh of cubic feet. The increase under *minor produce* is due to the non-entry, for 1885-86, of the value of free grazing in Murree and Kahuta.

4.—IMPORTS.

Imports.

67. The following statement shows the imports of timber and bamboos recorded during the year :—

River by which timber was imported.	Territory from which the timber came.	Deodar logs.	Pine logs.	Other logs.	Sleepers.	Scantlings.	Bamboos.	Miscellaneous timber.
Ravi and Ujh ..	Kashmir ...	7,084	96	...	27,724	19,733	...	82,970
Beas ...	Mandi and Kapurthala	...	...	...	49,289	...	6,020	171
Sutlej ...	Native states ...	...	38	5	35,356	...	39,283	125
Jhelum ...	Kashmir ...	3,950	925	...	74,499	...	...	84,495
Chenab ...	Kashmir ...	10,257	712	...	1,06,426	...	18,778	...
Indus ...	Independent:—Kunar, Swat, Bajaur, Duber, Kandia, Jalkot and Tangir ...	...	...	11,048	...	...	...	* 72,248
	TOTAL ...	21,291	1,771	11,053	2,93,294	19,733	64,081	2,40,009

* Shingles.

These figures compare thus with those of 1885-86 :—

Description of timber.	1885-86.	1886-87.	In 1886-87.	
			More.	Less.
Deodar logs ...	41,243	21,291	...	19,952
Pine logs ...	3,638	1,771	...	1,867
Other logs ...	1,09,578	11,053	...	98,525
Sleepers ...	3,05,871	2,93,294	...	12,577

They show that there was a large diminution in imports of all classes of timber.

CHAPTER V.—FINANCIAL RESULTS.

General (Form No. 58.)

68. The financial results of the year compare as follows with those of the previous years :—

Years.	Revenue.	Expenditure.	Surplus.
	Rs.	Rs.	Rs.
1884-85	7,49,352	5,58,070	1,91,282
1885-86	8,50,419	6,75,483	1,74,936
1886-87	11,27,277	7,16,510	4,10,767

The revenue was Rs. 2,76,858 greater, while the expenditure was increased by Rs. 41,027 only; the surplus was therefore larger by Rs. 2,35,831.

Revenue.

69. The revenue was increased in all divisions, except Rawalpindi, Kulu, Jhelum and Lahore; in which, taken together, it was about half a lakh less than last year. This was due principally to reduced sales of firewood in Lahore and Rawalpindi, and of timber in Jhelum. The increase of about 3¼ lakhs in other Divisions, is due to extended timber works, principally in Chamba, Bashahr and Pangi; to the disposal of the Kulu sleepers before the close of the financial year; and to increased sales of fuel to the Railway department, in both the Chenab and Montgomery Divisions. Timber removed by purchasers, miscellaneous minor produce, and confiscated drift and

waif wood, brought less than last year by Rs. 6,210, Rs. 2,487 and Rs. 15,544 respectively. There was an increase on grazing and fodder grass, amounting to Rs. 2,727.

Expenditure (Form No. 58).

70. The increased expenditure was incurred as follows, *viz.*: Rs. 40,000 under Conservancy and Works, and Rs. 1,000 under Establishment. As would naturally be expected from what has been said above, the principal increase is under departmental timber works, the expenditure on which exceeded that of last year by Rs. 49,191. But there are also increases under the following heads, *viz.* : —

	Rs.
Firewood and charcoal removed departmentally	1,979
Grass and minor produce	1,517
Communications and buildings (Bashahr and Chamba)	10,914

On the other hand there were decreases as under, *viz.* :—

Confiscated drift and waif wood	3,849
Rent of leased forests	3,343
Stores, tools and plant	8,402
Demarcation, improvement and extension	7,193

The differences under other heads are trifling. There were unusually heavy charges in 1885-86, due to the purchase of tramway stock for Changa Manga, and to demarcation work in Kangra.

The year's transactions.

71. Following the system pursued in former years, the figures representing the money value of the year's transactions, are given :—

	Rs.
Cash surplus	4,10,767
Add.—Increased value of revenue outstandings (Form No. 60) ...	10,130
TOTAL ...	4,20,897
Deduct.—Decreased value of produce at sale depôts (Form No. 57) ...	12,542
Net value ...	4,08,355

The figures for 1885-86, in which the increased value of revenue outstanding, to the amount of Rs. 36,715, was not credited, were given as Rs. 1,76,832. Had the outstandings of revenue been added, the net value would have appeared as Rs. 2,13,547.

Adjustment of accounts for timber works between Hills and Plains Divisions.

72. The statement which follows shows the revenue and expenditure, as well as the resulting surplus or deficit, in each Division, after adjusting accounts between the Hazara, Kulu, Chamba and Bashahr Divisions, on the one hand, and the Jhelum Kangra, Chenab and Phillour Divisions, on the other. This is on account of timber cut in the hills, but received and disposed of in the plains after it has been floated, in the shape of logs or sleepers, down the Jhelum, Beas, Chenab and Sutlej rivers respectively,

DIVISIONS.	Revenue.	Expenditure.	Surplus.	Deficit.
Hill Divisions.	Rs.	Rs	Rs.	Rs.
Hazara	69,814	51,575	18,239	...
Rawalpindi	38,709	36,286	2,423	...
Chamba	3,05,672	2,20,613	85,059	...
Kangra	38,906	40,475	...	1,569
Kulu	1,03,287	35,605	67,682	...
Bashahr	1,52,275	93,980	58,295	...
Plains Divisions				
Jhelum	28,720	30,955	...	2,235
Chenab	93,674	40,926	52,478	...
Lahore	95,375	68,585	26,790	...
Multan	52,450	19,740	32,702	...
Montgomery	1,42,280	11,103	1,31,177	...
Phillour	6,077	26,650	...	20,573
Direction	38	40,009	...	39,971
Total ...	11,27,277	7,16,510	4,10,767	...

The Kangra, Jhelum and Phillour Divisions thus show a deficit.

Financial results (Form No. 62.)

73. The surplus or deficit under the three great heads, (I) Departmental timber operations, (II) Other Revenue, and (III) Formation, Protection and Improvement, are given below for the last three years :—

	1884-85.		1885-86.		1886-87.	
	Surplus.	Deficit.	Surplus	Deficit.	Surplus.	Deficit.
	Rs.	Rs	Rs.	Rs.	Rs.	Rs.
I. Departmental timber operations ...	1,02,586	...	99,329	...	3,04,816	...
II. Other Revenue ...	2,71,983	...	2,53,874	...	2,86,156	...
III. Protection, &c. ...	..	1,83,287	..	1,78,267	...	1,80,205
	1,91,282	...	1,74,936	...	4,10,767	...

Outstandings of revenue.

74. The outstandings of revenue at the commencement of the year amounted to Rs. 55,840. Rs. 9,270 were written off, under sanction, mainly on account of grazing dues, and the outstandings at the close of the year were Rs. 65,970. Of this sum, Rs. 43,847 are on account of grazing fees in the Gujranwala district, and there is a similar outstanding of Rs. 14,683 in the Montgomery Division. Owing to insufficient rainfall, a good deal of distress prevailed among cattle owners; and the rules regarding payment were relaxed in consequence. Grazing revenue should be collected in advance.

Outstandings against contractors and disbursers

75. The amount outstanding against contractors and disbursers was reduced from Rs. 35,104 at the commencement, to Rs. 12,261 at the close of the year.

CHAPTER VI.—GENERAL REMARKS.

The year's results.

76. From the preceding chapters it will have been seen that, while the surplus revenue of the year was considerably larger than usual, attention to the demarcation, improvement and extension of the forests, as well as to their development by means of improved communications, was not relaxed. The prevalence of forest fires, which is much to be regretted, was mainly due to the excessive dryness of the season.

Silk culture at Changa Manga.

77. The results of the further experiment in silk culture at Changa Manga were unfavorable, and orders have been received sanctioning its discontinuance.

Extraction of turpentine.

78. An attempt, which was fairly successful in Hazara and Bashahr, was made in the Hill Divisions, to extract crude turpentine from *pinus longifolia* and blue pine; and a report on the subject has been submitted to Government.

Tramway at Changa Manga.

79. The tramway at Changa Manga was in use throughout the year, and a special report on its working is about to be submitted.

Bakani slide.

80. The Bakani slide, in Chamba, was in full work throughout the year, and 2,234 logs were launched by it.

The labor question in Bashahr.

81. It is not possible to obtain sufficient local labor for the forest work in Bashahr, and 250 men were, therefore, brought from Kulu or Chamba to fell and extract timber, while 100 Amritsar sawyers and a like number of Baltis, for employment on road making, bridging, and carrying sleepers, were engaged. The work was much better done than in former years, but it involves the importation and storage of large quantities of grain; Mr. Minniken arranged the needful supply, by the establishment of a small mule train.

Kashmir River Rules.

82. The question of the Kashmir River Rules and of the levy of rafting fees by Government, on timber belonging to the Kashmir Darbar, is still under consideration.

Standing orders, Punjab Rivers.

83. On the 17th February Mr. H. C. Hill, Officiating Conservator, issued a set of standing orders regarding the Punjab rivers, framed under the Rules of Government, published in Notification No. 340F. and 341F, dated 19th August 1879.

Meteorological observations.

84. Mr. Minniken kept a register of temperature and of rain and snowfall. Weekly and monthly reports were sent by him to the Director of Settlements, the Meteorological Department, and the Deputy Commissioner. He reports that the winter in Bashahr was a late one, and that all the forests were under snow on the 31st March.

STATEMENTS.

Annual Form No. 49.

FOREST DEPARTMENT, PUNJAB.

Area of Reserved Forests, 1886-87.

Division.	Range.	Civil District or Territory.	Name of Forest Unit or Working Circle.	Area on 1st April 1886. Acres.	Area on 1st April 1886. Equivalent in square miles.	Added during the year. Acres.	Excluded or transferred to other heads. Acres.	Area on 1st March 1887. Acres.	Area on 1st March 1887. Equivalent in square miles.	No. and date of Notification of addition or transfer.
HAZARA.	Dungaguli	Hazara ...	Dungaguli Reserves ...	41,023	64·10	...	307*	40,716	63·62	* Punjab Government No. 363, F., dated 21st.
	Kaghan ...	,, ...	Kaghan Reserves ...	57,487	89·82	...	...	57,487	89·82	
	Siran ...	,, ...	Siran Reserves	20,986	32·80	...	...	20,986	32·80	
	Khanpur ...	,, ...	Khanpur ,,	31,786	49·66	...	...	31,786	49·66	
			Total ...	1,51,282	236·38	...	307	1,50,975	235·90	
RAWALPINDI.	Rawalpindi	Rawalpindi	Rawalpindi Reserves ...	35,520	55·50	...	...	35,520	55·50	
	Attock ...	,, ...	Attock Reserves. ...	6,420	10·03	...	...	6,420	10·03	
	Fatehjang	,,	Fatehjang Reserves ...	14,982	23·41	...	1,000†	13,982	21·85	
	Kahuta ...	,, ...	Kahuta Reserves. ...	5,910	9·23	35,162*	...	41,072	64·18	* Gazette Notification No. 431, dated 27th Octr. 1886.
	Murree ...	,, ...	Murree ..	...	...	30,462*	...	30,462	47·60	
			Total ...	62,832	98·17	65,624	1,000	1,27,456	199·16	
CHAMBA.	Pangi ...	Chamba ...	Pangi forests	38,000	59·38	...	...	38,000	59·38	
	Dalhousie...	,, ...	Kalatop ...	2,602	4·06	...	...	2,602	4·06	
	,, ...	,, ...	Kainthli ...	964	1·51	...	...	964	1·51	
	,, ...	,, ...	Bakloh ...	643	1·00	...	...	643	1·00	
	,, ...	,, ...	Banikhet ...	517	·81	...	...	517	·81	
	Bhandal ...	,, ...	Bhandal forests ...	9,797	15·30	...	...	9,797	15·30	
	Tisa ...	,, ...	Tisa forests ...	23,834	37·24	...	...	23,834	37·24	
	Barmaur ...	,, ...	Barmaur forests ...	19,373	30·27	...	...	19,373	30·27	
	Chamba. ...	,, ...	Chamba forests ...	17,975	28·09	...	...	17,975	28·09	
			Total ...	1,13,705	177·66	...	...	1,13,705	177·66	
KANGRA.	Dera ...	Hoshiarpur	Dera Reserves	14,900	23·28	13‡	...	14,913	23·30	
	,,	Kangra ...	Do. ...	11,066	17·29	...	...	11,066	17 29	
	Beas River	Amritsar ...	Gariwal ...	445	·70	..	..	445	·70	
	,,	Hoshiarpur	Bolas ...	585	·91	...	30§	555	·87	
	Nurpur ...	Kangra ...	Nurpur Reserves ...	9,402	14·69	...	...	9,402	14·69	
			Total ...	36,398	56·87	13	30	36,381	56·85	
BASHAHR.	Neogli ...	Simla ...	Neogli Reserves ...	14,720	23·00	...	...	14,720	23·00	
	Tranda ...	,, ...	Tranda Reserves ...	19,840	31·00	...	...	19,840	31·00	
	Kilba ...	,, ...	Kilba Reserves	6,833	10·68	...	...	6,833	10·68	
	Kailas ..	,, ...	Kailas Reserves ...	25,600	40·00	...	...	25,600	40·00	
	Chini ...	,, ...	Chini Reserves ...	13,440	21·00	...	...	13,440	21·00	
	Pandrabis...	,, ...	Pandrabis Reserves ...	28,800	45·00	...	...	28,800	45·00	
			Total ...	1,09,233	170·68	...	...	1,09,233	170·68	
			Carried over ...	4,73,450	739·76	65,637	1,337	5,37,750	840·25	

* Military Locations now deducted.
† Excluded owing to error in former calculation.
‡ Correction of former returns.
§ Lost by erosion.

Annual Form No. 49.

FOREST DEPARTMENT, PUNJAB.

Area of Reserved Forests 1886-87.—continued.

Division.	Range.	Civil District or Territory.	Name of Forest, Unit or Working Circle.	Area on 1st April 1886. Acres.	Area on 1st April 1886. Equivalent in square miles.	Added during the year. Acres.	Excluded or transferred to other heads. Acres.	Area on 1st March 1887. Acres.	Area on 1st March 1887. Equivalent in square miles.	No. and date of Notification of addition or transfer.
			Brought forward	4,73,450	739·76	65,637	1,337	5,37,750	840·25	
Jhelum.	Jhelum	Jhelum ..	Jhelum Reserves ...	83,961	131·19	2*	...	83,963	131·19	
	River	,, ...	Reserved Belas	2,160	3·38	2*	...	2,162	3·38	
	Talagang ...	,, ...	Talagang Reserves .	24,671	38 55	..	...	24,671	38·55	
	Chakwal ...	,, ...	Chakwal Reserves ...	14,689	22·95	...	...	14,689	22·95	
	Pind Dadan Khan ...	,, ...	Pind Dadan Khan Reserves ...	68,487	107·01	2*	...	68,489	107·01	
			Total ...	1,93,968	303·08	6	...	1,93,974	303·08	
Chenab.	Chenab River	Gujrat ...	Gujrat Reserves	1,757	2·74	3†	...	1,760	2·75	
	,, ..	,, ...	Kathala plantation . .	824	1·29	92†		916	1·43	
	Pubbi ...	,, ...	Pubbi .	25,185	39·35	..	.	25,185	39·35	
	Phalian ...	,, ...	Phalian Reserves ...	20,006	31·26	...	.	20,006	31·26	
	Gujranwala	Gujranwala	Gujranwala ..	576	·90	300‡	...	876	1·37	‡ No. 244, dated 15th July 1886.
	Chenab River	,, ...	Thatta Faqirulla ...	1,090	1·70	22§	...	1,112	1·73	
	Hafizabad...	,, ...	Hafizabad Reserved ...	36,997	57·81	...	.	36,997	57·81	
			Total ...	86,435	135·05	417	...	86,852	135·70	
Lahore.	Chunian ...	Lahore ...	Changa Manga	18,177	28·40	2,066‖	...	10,132	15·83	
	Lahore ...	,, ...						10,111	15·80	
			Shahdera plantation ...	1,226	1·91	28‖	...	1,254	1·96	
	,, ...	,, ...	Carob plantation ...	23	·04	... .	...	23	·04	
	,, ...	,, ...	Sadhanwali plantation ...	349	·54	...	...	349	·54	
	,, ...	,, ...	Jhoke plantation ...	2,976	4·65	...	...	2,976	4·65	
	,, ...	Amritsar ...	Amritsar Reserves ...	2,323	3·63	...	...	2,323	3·63	
			Total . .	25,074	39·17	2,094	...	27,168	42 45	
Mooltan.	Serai Sidhu	Mooltan ...	Serai Sidhu Reserves ...	33,613	52·52	...	...	33,613	52·52	
	Lodhran ...	,, ...	Lodhran Reserves ...	7,736	12·09	...	...	7,736	12 09	
	Mailsi ...	,, ...	Mailsi Reserves	28,918	45·18	...	...	28,918	45·18	
			Total ...	70,267	109·79	...	...	70,267	109·79	
Montgomery.	Gugera ...	Montgomery	Gugera Reserves ...	22,510	35·17	...	...	22,510	35·17	
	,, ...	,, ...	Montgomery Reserves ...	18,607	29·07	...	...	18,607	29 07	
	,, ...	,, ...	Chichawatni Reserves ...	14,618	22·84	...	...	14,618	22·84	
			Total ...	55,735	87·08	...	...	55,735	87·08	
			Carried over ...	9,04,929	1,413 93	68,154	1.337	9,71,747	1,518·35	

* Addition due to clerical error in last return. † By River action. ‡ Chichra.
§ By River action. ‖ Revised measurement from Working Plan.

Annual Form No. 49.

FOREST DEPARTMENT, PUNJAB.

Area of Reserved Forests, 1886-87.—continued.

Division.	Range.	Civil District or Territory.	Name of Forest, Unit of Working Circle.	Area on 1st April 1886. Acres.	Area on 1st April 1886. Equivalent in square miles.	Added during the year. Acres.	Excluded or transferred to other heads. Acres.	Area on 1st March 1887. Acres.	Area on 1st March 1887. Equivalent in square miles.	No. and date of Notification of addition or transfer.
			Brought forward	9,04,929	1,413·93	68,154	1,337	9,71,746	1,518·35	
Phillour	Phillour ...	Jullundur...	Jullundur plantation...	51	·07	...	...	51	·07	
	,, ...	,, ...	Phillour plantation ...	220	·34	...	...	220	·34	
	,, ...	,, ...	Serangwal	1,104	1·72	...	1,104*	...	...	* No. 201 dated 26th March 1886.
	Ludhiana ...	Ludhiana ..	Ludhiana plantation	197	·31	...	...	197	·31	
	,, .	Umballa ...	Jagadhri plantation	201	·33	...	...	201	·33	
	Kalesar ...	,, ...	Kalesar Reserves ...	...	...	11,820†	...	11,829	18·48	† No. 190 dated 28th April 1886.
			Total ..	1,773	2·77	11,829	1,104	12,498	19·53	
Simla.	District ...	District ...	Kotgarh ...	...	...	1,454	...	1,454	2 29	
	,, ...	,, ...	Kotkhai ...	...	...	7,190	...	7,190	11·23	
			Total ..	...	...	8,644	...	8,644	13·52	
			GRAND TOTAL	, 06,702	1,416 70	88,627	2,441	9,92,888	1,551	
		TOTAL FOR 1885-86. ...		.	1,301·	43,715	27,258	9,06,702	1,416·70	

* Settlement Survey. † By Forest Survey.

Abstract of changes during the year.

				Acres.
Area at the commencement of the year				9,06,702
Added—				
By Notification	86,396			
By net result of river action	87			
By correction of areas	1,113			
		87,597		
Excluded—				
By Notification		1,411		
Net addition				86,186
Area at the close of the year				9,02 888

Area of Protected Forests, 1886-87.

Circle.	Range.	Civil District or Territory.	Name of Forest, Unit of Working Circle.	Area on 1st April 1886. Acres.	Area on 1st April 1886. Equivalent in square miles.	Added during the year. Acres.	Excluded or transferred to other heads. Acres.	Area on 1st March 1887. Acres.	Area on 1st March 1887. Equivalent in square miles.	No. and date of Notification of addition or transfer.
Rawalpindi	Fatahjang	Rawalpindi	Kalachitta .	98,575	154·02	...	5,381†	93,194	145·62	*No. 63, dated 17th February 1887, under Section 29 of Act VII of 1878.
	Murree ...	,, ...	Murree Protected Forests	...	...	23,232*	...	23,232	36 30	
	Kahuta ...	,, ...	Kahuta ...	...	...	20,126*	...	20,126	31·45	
			Total ...	98,575	154·02	43,358	5,381	1,36,552	213·37	
Chenab.	Hafizabad...	Gujranwala	Hafizabad Protected Forests	1,06,919	167·06	...	2,250‡	1,04,669	163·54	
			Total ...	1,06,919	167 06	...	2,250	1,04,669	163·54	
		GRAND TOTAL ...		2,05,494	321·08	43,358	7,631	2,41,221	376	
		TOTAL FOR 1885-86 ...		1,99,040	3 11	17,950	11,496	2,05,494	321·08	

† Due to corrections by latest Settlement. ‡ Alienated as grants.

Abstract of changes during the year.

				Acres.
Area at the commencement of the year				2,05,494
Added—				
By Notification	43,358			
Excluded—				
By grants of land ...	2,250			
By correction of areas ...	5,381	...	7,631	
Net addition ...				35,727
Area at the close of the year				Acres 2,41,221

Annual Form No. 49.

FOREST DEPARTMENT, PUNJAB.

Area of unclassed State Forests, 1886-87.

A.—Under the Forest Department.

Division.	Range.	Civil District or Territory.	Name of Forest, Unit or Working Circle.	Area on 1st April 1886. Acres.	Area on 1st April 1886. Equivalent in square miles.	Added during the year. Acres.	Excluded or transferred to other heads. Acres.	Area on 1st March 1887. Acres.	Area on 1st March 1887. Equivalent in square miles.	No. and date of Notification of addition or transfer.
Rawalpindi.	Kahuta ...	Rawalpindi	Kahuta Range Rakhs (demarcated)...	55,032	85·98	256 *a*	55,288 *b*	...	...	
	,, ...	,, ...	Kahuta Range Rakhs (undemarcated)...	...	...	82,800 *c*	...	82,800	129·38	
	Murree ...	,, ...	Murree Range Rakhs (demarcated)...	57,944	90·54	...	57,944 *d*	...	...	
	,, ...	,, ...	Murree Range Rakhs (undemarcated)...	...	...	73,400 *e*	...	73,400	114·69	
	Attock ...	Peshawar...	Jabba Jhil ...	580	·91	. .	...	580	·91	
			Total ...	1,13,556	177·43	1,56,456	1,13,232	1,56,780	244·98	
Chamba.	River ...	Gurdaspur	Gurdaspur Rakhs ...	8,882	13·88	...	...	8,882	13·88	
			Total ...	8,882	13·88	...	...	8,882	13·88	
Kangra.	Dera ...	Kangra ...	Dera Range Rakhs ...	16,531	25·51	1,87,238*	...	2,03,569	318·07	
	,, ...	Hoshiarpur	Hoshiarpur Rakhs ...	42,240	66·00	40,650*	...	82,890	129·51	
	Nurpur ...	Kangra ...	Nurpur Range Rakhs ..	...	...	91,463*	.	91,463	142·91	
			Total ...	58,571	91·51	3,19,351	...	3,77,922	590·49	
Kulu.	Upper Kulu	Kangra ...	Upper Kulu Range ...	71,322	111·44	...	904	70,418	110·03	
	Lower Kulu	,, ...	Lower Kulu Range ...	25,542	39·91	...	50	25,492	39·85	
	Inner Seoraj	,, ...	Inner Seoraj Range ...	69,958	109·31	...	55	69,903	109·22	
	Outer Seoraj	,, ...	Outer Seoraj Range . .	58,550	91·48	...	60	58,490	91·39	
	Waziri Rupi	,, ...	Waziri Rupi Range ...	1,22,717	191·75	...	70	1,22,647	191·64	
			Lahoul ...	. .	...	2,560	...	2,560	4·00	
			Total ...	3,48,089	543·89	2,560	1,139	3,49,510	546·11†	
Bashahr.	Kilba ...	Simla ...	Kilba Range	...	...	5,967*		7,887	12·32	
	Kailas ...	,, ...	Kailas Range	...	..			5,120	8·00	
	Chini ...	,, ...	Chini Range	...	...			2,560	4·00	
	Pandrabis...	,, ...	Pandrabis Range ...	21,760	34·00	...	...	3,200	5·00	
	Neogli ...	,, ...	Neogli Range	...	..			5,120	8·00	
	Tranda ...	,, ...	Tranda ...	...	...			3,840	6·00	
			Total ...	21,760	34·00	5,967	...	27,727	43·32	
Jhelum.	River ...	Gujrat ...	Belas ...	424	·66	...	...	424	·66	
	Khushab ...	Shahpur ...	Khusab Rakhs	1,34,824	210·66	...	...	1,34,824	210·66	
			Total ...	1,35,248	211·32	...	...	1,35,248	211·32	
			Carried over...	6,86,106	1,072·03	4,84,334	1,14,371	10,56,069	1,650·10	

(*a*) 256 Corrections of areas.
(*b*) Transferred to Reserves and protected forests.
(*c*) Omitted in former returns.
(*e*) Omitted in last year's returns.
(*d*) 53,694 transferred to Reserves and Protected forests.
4,250 Corrections of areas.

57,944

* Additions due to discovery of errors in former Returns and to complete omission of the forests in the Nurpur tahsil and range as follows:—

Dera Tahsil	70,452
Hamirpur Tahsil	1,16,786
Nurpur Tahsil	91,463
Unah Tahsil	40,650
	3,19,351

Omitted from last Return.

† Figures corrected according to Settlement Officer's Report.

Annual Form No. 49.

FOREST DEPARTMENT, PUNJAB

Area of unclassed State Forests, 1886-87.—concluded.

Division.	Range.	Civil District or Territory.	Name of Forest, Unit of Working Circle.	Area on 1st April 1886. Acres.	Area on 1st April 1886. Equivalent in square miles.	Added during the year. Acres.	Excluded or transferred to other heads. Acres.	Area on 1st March 1887. Acres.	Area on 1st March 1887. Equivalent in square miles.	No. and date of Notification of addition or transfer.
			Brought forward	6,86,106	1,072·03	4,84,834	1,14,371	10,56,069	1,650·10	
Chenab.	Gujranwala	Gujranwala	Gujranwala ..	300	·47	...	300*	...	...	
	Hafizabad...	,, ...	Hafizabad Rakhs ...	2,832	4·43	...	...	2,832	4·43	
	Chenab River	,, ..	Belas	2,581	4·03		2,197†	384	·60	
	,, ...	Gujrat ...	,, ...	5,095	7·96	2,307a	305b	7,187	11·23	
	,, ...	,, ...	Kuthala plantation ..	80	·05	15b	15b	15	·02	
	Bhera ...	Shahpur ...	Bhera Rakhs	1,42,920	223 31	...	...	1,42,920	223·31	
	Jhang ...	Jhang ...	Jhang Rakhs	81,892	127·95	...	...	81,892	127 95	
	Chenab River	Sialkot ...	Belas ...	84	·13	10b	1b	93	·15	
			Total ...	2,35,734	368·33	2,408	2,810	2,35,323	367·69	
Lahore.	Chunian ..	Lahore ...	Chunian Rakhs	1,07,810	168·45	...	505‡	1,07,305	167·66	
	Lahore ..	,, ...	Lahore Rakhs	28,326	44·26	...	531‡	27,795	43·43	
	Sharakpur	,, ..	Sharakpur ...	73,231	114 42	...	...	73,231	114·42	
			Total ...	2,09,367	327·13	...	1,036	2,08,331	325·51	
Mooltan.	Lodhran ...	Mooltan ...	Lodhran Rakhs	17,054	26·64	4,376§	...	21,430	33·48	
	Mailsi ...	,, ...	Mailsi ,,	17,491	27·33	...	...	17,491	27 33	
	Sanawan ...	Muzaffargarh	Sanawan ,,	11,086	17·32	...	...	11,086	17·32	
	Muzaffargarh	,, ...	Muzaffargarh Rakhs ...	10,284	16·07	...	...	10,284	16·07	
	Alipur ..	,, ...	Alipur Rakhs	27,391	42·80	...	360‖	27,031	42·24	
	Rajanpur ..	D. G. Khan	Rajanpur ,,	16,000	25 00	360‖	...	16,360	25 56	
	D. G. Khan	,, ...	D. G. Khan Rakhs ...	3,000	4·69	...	...	3,000	4·69	
			Total ...	1,02,306	159 85	4,736	360	1,06,682	166 69	
Montgomery.	Gugera .	Montgomery	Gugera Rakhs	2,18,467	341·36	...	...	2,18,467	341·36	
	Montgomery	,, ...	Montgomery Rakhs ...	87,120	136·12	...	...	87,120	136 12	
	Chichawatni	,, ...	Chichawatni Rakhs ..	1,82,177	284·65	...	800*	1,81,377	283·40	
			Total ...	4,87,764	762·13	...	800	4,86,964	760·88	
Phillour.	Phillour ...	Jullundur	Sarangwal ...	200	·31	1,104c	1,304b	...	...	
	Kalesar ...	Umballa ...	Kalesar ...	11,829	18·48	...	11,829c	...	...	No. 199, dated 28th April 1886.
	Sabathu ...	Simla ...	Sabathu ...	370	·57	...	...	370	·57	
	Dagshai ...	,, ..	Dagshai ...	400	·63	...	...	400	·63	
			Total ...	12,799	19·99	1,104	13,133	770	1 20	
			Grand Total	17,34,076	2,709·46	4,92,582	1,32,519	20,94,139	3,272	
		Total for 1885-86 ...		...	2,908·00	3,57,303	4,84,347	17,34,076	2,709·46	

Abstract of changes during the year—

Area at the commencement of the year				17,34,076
Added—				
By transfer from reserves	1,104			
Brought on books for first time	4,85,894			
		4,86,998		
Excluded—				
By transfer to reserved and protected forests	1,21,111			
,, transfer to Military Department	1,304			
,, grants of land	1,836			
,, net result of river action	471			
,, correction of areas	2,213			
		1,26,935		
		Net addition ...		3,60,062
Area at the close of the year...			Acres	20,94,139

* Transferred to Reserve.
† Transferred to Gujrat.
(a) 200 on account River action.
2,197 transferred fron Gujranwalla
2,307
(b) River action.

‡ Alienated as grants. § Transferred from areas formerly called "District Forests under the Deputy Commr."
‖ River action. * Leased by the Deputy Commissioner for cultivation.
(a) Transferred from Reserves. (b) Made over to Military Department. (c) Transferred to Reserves.

Annual Form No. 50.—[*Prescribed.*]

FOREST DEPARTMENT, PUNJAB.

Register of breaches of Forest Rules during 1886-87.

Forest Division and Civil District.	Cases pending from 1885-86.	New Cases of the year.					Total cases.	Disposed of during the year.						Cases pending at close of year.
		Injury to forest by fire.	Unauthorized felling or appropriation of wood and minor forest produce.	Grazing without permission or in tracts in which grazing is prohibited.	Other offences.	Total new cases of the year.		Convictions.		Acquittals.		Total.		
								Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	
HAZARA DIVISION.														
Hazara District ...	...	7	57	27	4	95	95	79	298	16	70	95	368	...
RAWALPINDI DIVISION.														
Rawalpindi District ...	12	...	76	...	15	91	*96	77	203	16	35	93	238	3
CHAMBA DIVISION.														
Chamba State ...	4	7	19	1	...	27	31	26	92	2	10	28	102	3
KANGRA DIVISION.														
Kangra District ...	...	3	76	26	3	108	108	104	185	2	8	106	193	2
Hoshiarpur ,, ...	...	2	15	3	3	23	23	17	66	4	14	21	80	2
Amritsar ,, ...	...	...	...	...	2	2	2	...	...	2	4	2	4	...
Jullundur ,, ...	...	...	...	...	1	1	1	1	4	...	1	1	5	...
Lahore ,, ...	...	...	...	...	2	2	2	2	4	...	...	2	4	...
KULU DIVISION.														
Kangra District ...	23	33	58	2	21	114	137	89	1,147	29	193	118	1,340	19
BASHAHR DIVISION.														
Simla District ...	65	7	32	2	36	77	142	47	67	15	15	62	82	80
JHELUM DIVISION.														
Jhelum District ...	5	1	60	15	10	86	91	67	146	23	52	90	198	1
Shahpur ,, ...	1	...	24	12	7	43	44	37	92	6	25	43	117	1
Gujrat ,, ...	...	...	1	...	...	1	1	1	1	...	...	1	1	...
Rawalpindi ,, ...	1	...	5	...	...	5	6	4	4	1	3	5	7	1
CHENAB DIVISION.														
Gujranwala District ...	...	3	23	13	1	40	40	36	54	3	1	39	55	1
Gujrat ,, ...	1	3	56	17	9	85	86	58	260	21	178	79	438	7
Shahpur ,, ...	...	2	8	21	4	35	35	25	99	10	102	35	201	...
Jhang ,, ...	1	...	4	...	...	4	5	3	4	1	2	4	6	1
Sialkot ,, ...	...	...	1	1	...	2	2	2	4	...	...	2	4	...
LAHORE DIVISION.														
Lahore District ...	...	...	13	5	16	34	34	25	106	8	65	33	171	1
Amritsar ,, ...	...	...	...	3	5	8	8	3	11	5	27	8	38	...
MOOLTAN DIVISION.														
Mooltan District ...	...	...	15	78	3	96	96	79	121	9	30	88	151	8
Muzaffargarh ,, ...	...	...	4	27	1	32	32	19	40	7	32	26	72	6
Dera Ghazi Khan ,, ...	2	...	...	2	...	*2	4	2	2	2	5	4	7	...
MONTGOMERY DIVISION.														
Montgomery District ...	144	...	104	102	63	269	413	177	266	50	200	227	466	186
PHILLOUR DIVISION,														
Jullundur District ...	...	...	4	...	2	6	6	5	5	1	1	6	6	...
Simla ,, ...	3	...	3	1	6	10	13	6	9	5	11	11	20	2
Umballa ,, ...	...	...	1	...	...	1	1	1	1	...	...	1	1	...
Total ...	262	68	659	358	214	1,299	1,554	992	3,291	238	1,084	1,230	4,375	324
Total for 1885-86 ...	163	84	642	209	179	1,114	1,279	804	2,541	209	2,110	1,013	4,651	262

* Excludes 7 of erroneously reported 12 pending cases.

Annual Form No. 51.—[*Prescribed.*]

FOREST DEPARTMENT, PUNJAB.

Area of Forest tracts protected from Fire during the dry Season 1887.

DIVISION	FOREST TRACTS.	Year in which protection commenced.	Area actually protected up to 15th June 1886.	DURING DRY SEASON OF 1887.			Cost during the season.	REMARKS.
				Area attempted to be protected.	Failures.	Actually protected.		
							Rs.	
Hazara ...	Batrassi* ..	1885	1,185	1,252	613	639	94	*Except in the case of Batrassi where Rs. 52 were spent on fire lines, the whole of the expenditure in the Hazara division was incurred in payment of patrols.
	Masar ...	,,	7,747	7,892	7,892	...	48	
	Daddar ...	,,	801	801	801	..	12	
	Baz Khan ...	,,	490	1,053	872	181	12	
	Tanglai ...	,,	1,869	5,444	5,444	...	24	
	Kotla ...	,,	1,622	1,629	1,594	35	...	
	Ferozepur ...	,,	365	365	365	.	.	
	Kuhmal ...	1886	185	185	..	185	...	
	Norata ...	1885	905	1,010	157	853	...	
	Sangreri ...	,,	520	520	504	16	...	
	Milan Bhoto ...	,,	2,950	2,950	2,950	..	...	
	Rahi ...	,,	190	190	...	190	...	
	Khui ...	,,	231	231	.	231	..	
	Trimman† ...	,,	392	392	392	. .	...	†The areas from Trimman downwards usually escape burning without special protective measures.
	Chanali ...	,,	391	391	.	391	...	
	Muri ...	,,	639	682	325	357	...	
	Jawahan ...	1887	...	1,376	. .	1,376	...	
	Garmthan ...	,,	...	2,675	806	1,869	...	
	Kamalpur ...	,,	...	222	...	222	...	
	Karwali ...	,,	...	999	235	764	...	
	Khui Kamman ...	,,	...	3,404	651	2,753	...	
	Kohala ...	,,	...	1,692	210	1,482	...	
	Dartian ...	,,	...	515	...	515	...	
	Bukan ...	,,	...	91	...	91	...	
	Babootri ...	,,	...	596	596	...	...	
	Kandi ...	,,	...	169	169	. .	..	
	Buchar ...	,,	.	258	...	258	168	
	Pina ...	,,	.	179	...	179	...	
	Nala ...	,,	...	254	254		...	
	Dotara ...	,,	...	270	59	211	...	
	Satoura ...	,,	.	1,786	...	1,786	...	
	Samandar ...	,,		293	173	120	...	
Rawalpindi ...	Murree—15 reserves ...	1885	25,589	24,473	7,382	17,091	45	Expenditure on fire tracers and patrols.
	,, —12 Protected forests ...	,,	8,449	5,380	1,106	4,274	14	
	Kahuta—21 reserves ...	,,	30,700	31,515	20,749	10,766	32	
	,, —11 Protected forests ...	,,	10,304	..	...		.	
	Kheri Murat ...	1886	13,775	13,775		13,775	24	
	Kherimar ...	,,	2,261	2,261	20	2,241	19	
	Margalla ...	1887	...	18,930	1,029	17,901	11	
Chamba ...	Bakloh ...	1872	643	643	40½	6,02½	57	
	Kalatop ...	1871	2,870	2,602	1 acre. 10	2,602	6	
	Kanithli .	1882	.	964	.	964	13	
	Shahpur Kandi ..	,,	8,882	8,882	165	8,717	30	
	Surkhigali ...	1885	306	306	50	256	45	
	Baunikhet ...	1874	211	211	30	181	45	
	Carried over ...		1,24,465	1,49,708	55,638½	94,074½		

Annual Form No. 51.—[*Prescribed.*]

FOREST DEPARTMENT, PUNJAB.

Area of Forest tracts protected from Fire during the dry Season 1887.

DIVISION.	FOREST TRACTS.	Year in which protection commenced.	Area actually protected up to 15th June 1886.	DURING DRY SEASON OF 1887.			Cost during the season.	REMARKS.
				Area attempted to be protected.	Failures.	Actually protected.		
	Brought forward ...	...	1,24,465	1,49,708	55,633½	94,074½	...	
Kangra ...	Lohara, Jawar Lambaseil and part of Panjal ...	1875	2,000	2,000	...	2,000	31	
	Dhamtal ...	1879	600	624	...	624	15	
	Talara and Kalak ...	1882	1,000	1,123	...	1,123	13	
	Tatal and Mehdar ...	,,	1,600	3,331	...	3,331	15	
	Chitral and Jakar ...	,,	1,700					
	Bindraban Reserve ...	1883	600	617	20	597	10	
	Parts of Chabootra Hutmal Dhar, Jakh, Bakroh ...	1884	7,000	7,000	...	7,000	80	
	Karnpur and Bindraban...	,,	3,000	3,000	...	3,000	37	
	Mastgarh, Batoi and Swarka ...	1885	600	587	...	587	14	
	Hathi Dhar ...	,,	1,500	1,500	400	1,100	13	
	Baleh and Soldeh Reserve	1887	...	579	...	579	10	
Kulu ...	Seal Beal ...	1885	85	63	...	63	7	
	Somal Chalaon ...	,,	260	260	...	260	33	
	Dungri ...	1887	...	60	...	60	1	
	Riacha thach ...	,,	...	280	...	280	3	
	Traijakar ...	,,	...	340	...	340	3	
Bashahr ...	Runang ...	1886	...	708	...	708	78	
Chenab ...	Pabbi plantation ...	,,	...	681	...	681	38	
Multan ...	Shujaitpur* ...	1885	1,005	1,010	450	560	30	* Protection by fire tracers and additional patrols.
	Jalalpur ...	,,	1,535	1,533	...	1,533	15	
	Alipur Range ...	1886	...	23,751	1,895	21,856	81	
	Rajanpur do. ...	,,	...	15,000	4	14,996	56	
Montgomery...	Kalera ...	1884	4,561	4,561	...	4,561	27	
	Darsana ...	,,	1,663	...	...	...	...	
	Mirdad, Montgomery, Ranjit Singh and Sayed wala Reserve ...	1886	...	17,967	...	17,967	50	
Phillour ...	Kalesar ...	1882	2,500	2,800	400	2,400	325	
	Sabathu and Jagadri ...	1887	...	370	2½	367½	11	
	TOTAL ...		1,55,674	2,39,453	58,805	1,80,648	1,695	

Annual Form No. 52.

FOREST DEPARTMENT, PUNJAB.

Area of Plantations, 1886-87.

DIVISION.	Name of Plantation.	AREA IN ACRES. On 1st April 1886.	Added during the year.	Excluded during the year.	Area on 31st March 1887.	RECEIPTS. Of the year. Rs.	CHARGES. Of the year. Rs.	REMARKS.
	REGULAR PLANTATIONS.	Acres.	Acres.	Acres.	Acres.			
KULU ...	Manali Forest gardens	5	...	...	5	...	...	
BASHAHR ...	Lee Garden ...	4	...	...	4	...	...	
	Sholtu ...	6	...	...	6	...	...	
JHELUM ...	Pira Ghaib ...	127	*12	12	127	...	276	* Failures restocked.
	Gandhala ...	...	†29	2‡	27	...	946	† 13 acres transferred from cultural operations.
	Belas Nath and Pindi Tatar ...	173	...	...	173	27	15	
	,, Sadhoki ...	1	...	...	1	3	5	‡ Failures.
	,, Kotli Gohan ...	8	...	...	8			
GUJRANWALA ...	,, Thatta Faqirulla	393	...	...	393	30	15	
	,, Mohla ...	15	...	§6	9	...	5	§ Lost by erosion.
	Changa Manga ...	11,409	...	‖2,329	9,080	40,597	22,092	‖ Reduced in accordance with latest surveys.
	Shahdera *cum* Jugian .	711	¶382	...	1,093	2,247	348	
LAHORE ...	Sadhanwali and Joke	1,290	...	...	334 / 956	108 / 1,977	... / 900	¶ 360 acres due to correction of figures and 22 to additional operations of the year.
	Nag ...	412	...	...	412	481	...	
	Carob plantations ...	23	...	...	23	...	242	
	Jullundur ...	51	...	...	51	110	...	
	Phillour ...	220	...	...	220	604	152	
	Ludhiana ...	197	...	...	197	300	...	
PHILLOUR ..	Sabathu ...	200	**95	...	295	1,098	646	
	Jagadhri ...	200	††1	...	201	82	...	** Added some years back but omitted.
	Dagshai ...	...	189	...	189	107	3,632	
	TOTAL REGULAR PLANTATIONS.	15,445	708	2,349	13,814	48,581	29,274	†† Due to corrected area.
	CULTURAL OPERATIONS.							
	Changlagali, No. 1 ...	44	...	...	44	...	...	
	Do. No 2 ..	...	...	...	...	..	...	5,074 square feet.
	Do. No. 3 ...	...	...	...	...	...	2	10,000 square feet.
	Do. Forest house plot ...	...	6	...	6	...	44	
	Kujagali ...	16	...	...	16	...	...	
	Kuthi ...	10	...	...	10	...	...	
	Malkandi No. 1 ...	8	...	...	8	...	...	
	,, No. 2 ...	...	2	...	2	...	70	
	Mari ...	...	5	...	5	...		
	Mari ...	5	...	...	5	...	...	
	Kerala ...	3	...	...	3	...	...	
	Makhanyal ...	2	...	...	2	...	...	
HAZARA ...	Garamthan { Mela ki ochoi.	47	...	...	47	...	44	
	Garamthan { Sallumar	5	227	...	232	...	522	
	,, Kotjundan ...	...	132	...	132	...		
	,, Toba Danda ...	...	5	...	5	...	13	
	Tejwal (Bichhan) ...	3	...	3	...	...	...	
	,, (Meurti) ...	...	1	...	1	...	7	
	Shina, Nuri Khas ...	..	16	...	16	...	86	
	Bhagin, Ganda ka Nakka and Bangaban							
	Chambi (Sir) ..	...	1	...	1	...	4	
	Baragali Bauli (Nagri Bala) ...	...	...	...	...	...	5	17,856 square feet.
	Dungagali (Bagan) ...	...	1	...	1	...	20	
	Nurseries ...	...	...	...	...	...	393	
	Total ...	143	396	3	536	...	1,210	
	Barakao (Margala reserve) ...	86	...	...	86	133	102	
	Pind Gundal Do. ...	9	...	...	9	...	...	
	Karung Nadi Do. ...	6	...	...	6	...	...	
	Athal (Hanigala) ...	13	...	...	13	...	...	
RAWALPINDI ...	Khari Murat (Nos. I to X.)	30	...	...	30	...	...	
	Kuhetra and Bariar ...	9	...	...	9	...	...	
	Patriata ...	2	...	...	2	...	6	
	Chili Chara ...	7	...	7	...	...	...	Wrongly entered in former return.
	Serfbari ...	...	½	...	½	...	4	Sowing 2 expropriated plots and hedging exotics at Goagali.
	TOTAL ...	142	½	7	155½	133	112	

Annual Form No. 52.

FOREST DEPARTMENT, PUNJAB.

Area of Plantations 1886-87—(continued.)

DIVISION.	Name of Plantation.	AREA IN ACRES. On 1st April 1886.	Added during the year.	Excluded during the year.	Area on 31st March 1887.	RECEIPTS. Of the year.	CHARGES. Of the year.	REMARKS.
	CULTURAL OPERATIONS —*continued.*	Acres.	Acres.	Acres.	Acres.	Rs.	Rs.	
CHAMBA ..	Pangi various ...	22	4	...	26	...	32	
	Bassu ...	149	...	...	149	...	73	
	Dhauri ...	25	...	...	25	...	...	
	Bakloh ...	...	...	...	...	6	...	
	Kalatop ...	144	67½	...	211½	196	1,095	
	Kaithli ...	14	88	...	102	...	683	
	Majour ...	1	...	...	1	...	...	
	Cherri ...	2	...	...	2	...	...	
	Padri and Bohar ...	2	12	...	14	...	574	
	Chatri ...	...	4	...	4	...	776	
	Khanni ...	...	4	...	4	...	52	
	Thanala ...	...	...	...	...	...	269	
	Lindi Bé ...	...	...	...	...	...	190	
	Nagali ...	...	...	...	...	...	19	
	Badka ...	...	...	...	...	...	12	
	Kansar ...	...	...	...	...	...	109	
	Sakral ...	...	...	...	...	...	6	
	Total ...	359	179½	...	538½	202	3,890	
KANGRA ...	Chitrí ...	6	4	...	10	...	...	
	Tatal ...	47	4	...	51	...	32	
	Bindraban ...	11	...	...	11	...	...	
	Bhali ...	2	..	...	2	...	...	
	Dhamtal ...	11	3	...	14	...	84	
	Nahan ...	19	...	...	19	...	...	
	Jamoli ...	5	...	...	5	...	...	
	Balwal ...	5	...	...	5	...	...	
	Samliam ...	21	1	(*b*) 1	21	...	1	(*b*) Failure of sowings.
	Tilli ...	3	...	...	3	...	...	
	Bajuri ...	6	...	...	6	...	...	
	Baldoa ...	7	..	...	7	...	...	
	Lohara ...	15	(*c*) 10	...	25	...	...	(*c*) Correction of area.
	Badiana ...	25	...	...	25	...	...	
	Chaliar ...	2	...	...	2	...	...	
	Aloh ...	1	...	...	1	...	...	
	Salaon ...	3	...	...	3	...	...	
	Mather ...	6	...	...	6	...	...	
	Paraneb ...	1	...	...	1	...	...	
	Bhaler ...	2	...	...	2	...	...	
	Madoli ...	3	...	...	3	...	...	
	Arroh ...	1	...	...	1	...	...	
	Choar ...	1	...	...	1	...	...	
	Hamirpur forest ...	84	...	...	84	...	...	
	Bagrian and Mullunwa	585	...	(*d*) 30	555	3,243	214	(*d*) Lost by erosion.
	Gagriwal ...	5	...	(*f*) 5	...	...	...	
	Karnpur ...	3	5	2	6	...	21	(*f*) Failure.
	Bindraban ...	...	4	(*h*) 3	1	...	20	(*h*) Failure.
	Bakarar ...	...	1	...	1	...	1	
	Total ...	880	32	41	871	3,243	323	
KULU ...	Dungri ...	34	...	...	34	...	...	
	Manalghan ...	53	...	...	53	...	...	
	Dunabial ...	27	...	...	27	...	...	
	Sial Bial ...	63	...	...	63	...	...	
	Manalgahr ...	41	...	...	41	...	...	
	Ba[illegible]dri ...	12	...	...	12	...	...	
	Dan[illegible] Deo ...	30	...	...	30	...	...	
	Chasal, Upper ...	11	...	...	11	...	...	
	Do. Lower ...	4	...	...	4	...	...	
	Shalingar ...	4	31	...	35	...	129	
	Dudlu ...	48	10	10	48	...	33	
	Brunudhar ...	17	1	1	17	...	2	
	Padi Chalaon ...	9	...	...	9	...	...	
	Bal Bial ...	3	1	1	3	...	11	
	Deoban ...	12	...	...	12	...	...	
	Sesni ...	3	...	...	3	...	...	
	Carried over ...	371	33	12	402	...	175	

Annual Form No. 52.

FOREST DEPARTMENT, PUNJAB.

Area of Plantations, 1886-87—(continued).

DIVISION.	Name of Plantation.	AREA IN ACRES. On 1st April 1886.	Added during the year.	Excluded during the year.	Area on 31st March 1887.	RECEIPTS. Of the year 1886. Rs.	CHARGES. Of the year 1886. Rs.	REMARKS.
		Acres.	Acres.	Acres.	Acres.			
	Brought forward ...	371	33	12	402	...	571	
	CULTURAL OPERATIONS. —*continued.*							
KULU ...	Phetaban ...	1	...	...	1	...	...	
	Ledi Chalaon ...	2	...	...	2	...	...	
	Shejuni ...	4	2	...	6	...	47	
	Sandhar ...	4	2	1	5	...	13	
	Bindradan (Sansi) ...	3	1	3	1	...	3	
	Do. (Jerri) ...	24	2	2	24	...	29	
	Soma Chalaon ...	45	9	6	48	...	51	
	Phulga ...	12	5	5	12	...	15	
	Daogi ...	2	...	...	2	...	...	
	Latura ...	67	25	25	67	...	2	
	Blajdhar ...	9	...	...	9	...	...	
	Solano ...	7	...	...	7	...	...	
	Ramgarh ...	1	...	...	1	...	...	
	Silla ...	4	...	...	4	...	...	
	Phone ...	5	...	...	5	...	...	
	Bagi ...	2	...	...	2	...	...	
	Gogarsil ...	...	3	...	3	...	20	
	Baker Kiara ...	...	2	...	2	...	20	
	Lot ...	...	1	...	1	...	3	
	Fojal Kalaun ...	...	6	...	6	...	23	
	Kashol ...	...	1	...	1	...	8	
	Manglaur ...	...	1	...	1	...	3	
	Total ...	563	103	54	612	...	412	
BASHAHR ...	Nachar, East ...	118	18	...	136	...	208	Rs. 34 on Nurseries.
	Runang ...	42	2	...	44	...	59	
	Sapni and Kumkumi...	170	50	...	220	...	153	
	Kunhi ...	2	...	...	2	...	...	
	Kilba ...	5	2	...	7	...	87	Rs. 81 on Nurseries.
	Derkali and Kashapat	1	1	...	2	...	22	Rs. 17 on Nurseries.
	Taranda ...	5	...	...	5	...	6	
	Gutrang ...	12	...	...	12	...	...	
	Nachar, West ...	3	2	...	5	...	15	
	Tangleng ...	8	...	...	8	...	...	
	Jani ...	1	5	...	6	...	30	Rs. 4 on Nurseries.
	Panwi ...	7	2	...	9	...	10	
	Kulba ...	...	2	...	2	...	9	
	Ramni ...	...	...	...	...	...	2	
	Junpan ...	...	...	...	...	...	10	
	Cholinghi ...	...	...	...	...	...	3	
	Total ...	374	84	...	458	...	614	
JHELUM ...	Gandhala Rakh ...	13	...	13	...	...	...	Transferred to regular Plantations.
	Ban Faqirulla ...	2	1	...	3	...	128	
	Garat ...	...	2	...	2	...	24	
		15	3	13	5	...	152	
CHENAB ...	Pubbi ...	561	120	...	681	23	1,219	
	Kikranwali ...	2	...	...	2	2	26	
	Chichra ...	3	2	...	5	5	47	
	Ghazi Chak ...	5	...	...	5	...	...	
	Gujranwala Nursery ...	1	...	...	1	...	6	
	Tibbi Tarar ...	2	...	...	2	...	...	
	Gujranwala Rakhs ...	3	...	...	3	...	7	
	Wazirabad Nursery ...	...	...	...	...	...	15	
	Jhikar Depôt ...	...	...	...	...	...	15	
	Total ...	577	122	...	699	30	1,335	
LAHORE ...	Kot Lakhpat ...	...	200*	...	200	622	546	Area omitted from last return.
	Dhig ...	...	112	67	45	...	264	
	TOTAL ...	...	312	67	245	622	810	

Annual Form No. 52.

FOREST DEPARTMENT, PUNJAB.

Area of Plantations, 1886-87.—(concluded).

DIVISION.	Name of Plantation.	AREA IN ACRES. On 1st April 1886	Added during the year.	Excluded during the year.	Area on 31st March 1887.	RECEIPTS. On the year 1886.	CHARGES. On the year 1886.	REMARKS
	CULTURAL OPERATIONS —*concluded.*	Acres.	Acres	Acres	Acres.	Rs.	Rs.	
MOOLTAN ...	Makhan Bela ..	.	1	1*	...	...	28	*Nursery, failure
	Chak-Kaora .	..	5	...	5	...	6	
	Makhdumpur ..	...	5	..	5	...	31	
	Vinoi .	..	35	...	35	...	50	
	Total ..		46	1	45	...	115	
MONTGOMERY	Okara Reserve .	22	1	1	22	...	4	
	Satghara ,,		2	.	2	.	4	
	Montgomery ,, ..	.	1½	.	1½	.	3	
	Muhammedpur ,, ...		1½		1½		3	
	Ranjit Singh ,,		1	..	1	.	2	
	Kalera		1		1	.	2	
	Experiments in Okara reserve.	.		...	.	...	57	Bunds repaired and Farash cuttings put out, partial success.
	TOTAL	22	8	1	29		75	
	GRAND TOTAL	3,095	1,285½	187	4,193½	4,230	9,048	

Add cost of Regular Plantations ...		29,274
		38,322
Deduct—Expenditure debited to AVIII (*f*) in all Divisions .		389
		37,933
Add—Erroneously charged to AVIII (*d*), in Rawalpindi, Chamba, Kangra and Kulu		148
Expenditure under AVIII (*d*) as per Form 58 .		38,081

Annual Form No. 53.

FOREST DEPARTMENT, PUNJAB

Trees felled or girdled by Government Agency during the year 1886-87 *(Selection fellings).*

DIVISION.	TREES FELLED OR GIRDLED. Description	Number	REMARKS
HAZARA .	Deodar (Cedrus deodara)	408	
	Paludar (Abies webbiana) . ..	30	
	Biar (Pinus excelsa) . . .	88	
	Chir (Pinus longifolia)	22	
	Rhin (Quercus incana) . .	16	
	Total .	564	
RAWALPINDI	Chir	1,180	
	Rhin . .	1,511	
	Trikan (Acer cultratum)	34	Maple
	Kaudar (Cornus macrophylla) ...	164	
	Baukher (Aesculus indicus) ..	32	
	Baukarun (Morus serrata) ..	19	Wild cherry.
	Various trees ...	30	
	Total . .	2,950	
CHAMBA	Deodar	4,690	
	Kail (Pinus excelsa) .. .	210	
	Total	4,900	
KULU	Deodar	642	
BASHAHR	Deodar	1,866	
	Box (Buxus Sempervireus)	882	
	Total ...	2,748	
	GRAND TOTAL ...	11,804	
	ABSTRACT.		
	Deodar	7,606	
	Box	882	
	Pines . .	1,510	
	Oak	1,527	
	Various trees . ..	279	
	Total	11,804	
	Total for 1885-86 ...	7,540	

Annual Form No. 54.—[*Prescribed.*]

FOREST DEPARTMENT, PUNJAB.

Outturn of Timber and Firewood during the year* 1886-87.

DIVISION.	Description of materials.	OUTTURN IN CUBIC FEET.								REMARKS.
		Selection fellings.	Clearances.	Thinnings.	Total.	REMOVED BY				
						Government Agency.	Purchasers.	Free Grants.	Right-holders.	
					RESERVED FORESTS.					
Hazara	Deodar logs	35,941	...	.	35,941	35,941	...	...	...	1,040 ogs.
	Pine „	636	...	..	636	636	...	...	...	18 „
	Deodar sleepers	35,819	...	.	35,819	35,819	...	...	...	10,234 B. G.
	Pine and other scantlings	14,366	...	...	14,366	14,366	...	...	...	
	Pine „ „ shingles	1,921	...	...	1,921	1,921	..	...	...	A shingle=·0065 c. ft.
	Firewood	...	1,49,262	...	1,49,262	29,431	1,19,831	...	...	Converted from mds. @ 2 and 3½ c. ft. stacked.
	Charcoal	10,773	...	...	10,773	10,773	...	..	...	„ „ „ @ 10½ c. ft. per maund.
	Miscellaneous trees	3,800	...	...	3,800	...	3,800	...	...	
	„ pieces	90	...	...	90	80	10	...	...	
Rawalpindi ...	Pine and other trees	1,35,182	...	...	1,35,182	24,680	1,10,502	...	...	
	Firewood and charcoal	8,94,709	...	...	8,94,709	2,42,719	6,51,990	...	...	8,413 mds. Charcoal by Government Agency.
	Firewood	...	..	6,81,088	6,81,088	.	...	...	6,81,088	
	Poles	1,775	...	...	1,775		1,775	...	...	
Chamba ...	Deodar logs	2,26,934	31,890	...	2,58,824	2,58,824	...	...	...	
	Other „	20,738	500	...	21,238	21,238	...	...	...	
	Deodar sleepers	2,45,427	...	..	2,45,427	2,45,427	...	..	...	
	„ scantlings	11,063	...	...	11,063	11,063	...	..	...	
	„ trees	3,800	...	...	3,800	...	...	...	3,800	@ 100 c. ft. per tree.
	Pine trees.	5,100	...	...	5,100	...	...	...	5,100	„ „
	Slabs	...	...	...	.	...	...	..	...	200 slabs removed by purchasers.
	Firewood	2,094	...	...	2,094	...	2,094	.	...	
Kangra	Pine and other trees	49,895	...	...	49,895	...	49,895	..	...	9,832 trees.

[XIV]

Bashahr	Deodar logs	1.72,344	11,061	...	1,83 405	1,83,405	...	...	...	
	„ B. G. Sleepers	29,984	5,153	...	35.137	35,137	...	...	...	
	„ N. G. „	2,571	...	...	2,571	2.571	..	...	...	
	Boxwood logs „	2,878	...	...	2,878	2,878	..	...	...	
Jhelum	Firewood	...	...	3,044	3,044	..	3,044	...	...	Stacked
Chenab	„	...	2,594	...	2,594	594	2 000	...	..	„
Lahore	Firewood	...	13,64 539	2,23,260	15,87,799	15,87,799	...	...	..	„
	Miscellaneous trees	...	..	230	230		230	...	...	
	Poles	..	..	60	60	...	60	...	..	
Multan	Firewood	..	16,85,401	...	16,85,401	24.818	16,60,583	..	..	Stacked
	Poles	...	246	...	246	.	246	..	...	430 poles
Montgomery ...	Firewood	...	23,44,098	...	23,44.098	...	23,44,098	...	..	Stacked
Phillour	Ballas (sál)	...	8	...	8	8	..	...	..	
	Firewood	...	3,324	...	3,324	309	3,015	...	..	
	Total	19,07,840	55,98,076	9,07,682	84,13,598	27,70,437	49,53,173	...	6,89,988	
	PROTECTED FORESTS.									
Rawalpindi	Pine and other trees	9,010	...	...	9,010	...	9,010	...	...	
	Firewood and charcoal	25,512	..	...	25,512	11,100	14,412	...	...	
	Poles	362	.	...	362	...	362	...	...	
Chenab	Firewood	..	1,34,855	...	1,34,855	75,000	59,855	...	...	Stacked
	Total ...	34,884	1,34,855	..	1,69,739	86,100	83,639	..	...	
	UNCLASSED STATE FORESTS.									
Rawalpindi . ..	Pines and other trees	1,09,340	...	...	1,09,340	...	...	1,09,340	...	
	Poles	55,732	...	...	55.732	...	...	55,732	...	
	Firewood	...	...	95,24,908	95,24,908	...	...	95,24,908	.	
Chamba	Deodar trees	13,920	...	...	13.920	...	...	...	13,920	
	Pines and other trees	4,92,060	180	...	4.92,240	..	27,480	..	4,64,760	
Kangra	Pines and other trees	2,16,090	...	...	2,16,090	...	73,120	1,34,503	8,467	12,543 trees.
	Firewood	9,150	.	...	9,150	...	.	9,150	.	3,050 loads.
	Carried over ...	8,96,292	180	95,24,908	104,21,380	...	1,00,600	98,33,633	4,87,147	

Annual Form No. 54.—[*Prescribed.*]

FOREST DEPARTMENT, PUNJAB.

Outturn of Timber and Firewood during the year* 1886-87.

DIVISION.	Description of materials.	OUTTURN IN CUBIC FEET.								REMARKS
		Selection fellings.	Clearances.	Thinnings.	Total.	REMOVED BY				
						Government Agency.	Purchasers.	Free grants.	Right-holders.	
	Brought forward ...	8,96,292	180	95,24,908	104,21,380	...	1,00,600	98,33,633	4,87,147	
Kulu	B. G. sleepers	29,526	17,315	..	46,841	46,654	187	...	..	
	N. G. „	596	736	...	1,332	1,332	...	...	..	
	Deodar scantlings	310	..	...	310	310	...	...	...	
	„ logs	37,326	...	...	37,326	37,326	.	...	...	
	„ trees	3,465	...	...	3,465	...	450	1,485	1,530	
	„ pieces	912	...	...	912	...	792	...	120	@ 2·5 c. ft. each.
	Miscellaneous trees	1,63,155	...	3,299	1,66,454	...	5,039	34,575	1,26,840	@ 15 „ „
	„ pieces	1,060	...	...	1,060	...	1,060	...	...	
Bashahr . ..	Deodar trees	12,670	...	...	12,670	...	...	12,670	..	
	Pine and other trees	2.36,220	..	...	2,36,220	...	...	2,36,229	...	
Jhelum	Firewood	...	...	769	769	...	769	...	...	
	Kau-handles	...	..	129	129	...	129	...	...	Stacked.
Chenab	Firewood	...	3,03,000	...	3,03,000	3.00,000	3,000	...	...	„
Lahore	Firewood	...	3,09,707	5,131	3,14,838	44,497	2,70,341	...	...	„
	Trees	...	...	180	180	...	180	...	...	4 trees.
Multan	Firewood	...	4,24,896	...	4,24,896	...	4,24,896	...	...	Stacked.
	Poles	...	4,827	...	4,827	...	4,827	...	...	3,902 poles.
Montgomery ...	Firewood	...	20,89,344	...	20,89,344	...	20,89,344	...	...	Stacked.
	Trees	...	90	...	90	...	90	...	...	Solid.
	Koril rafters	...	2,854	...	2,854	...	2,854	...	...	
	Total ...	13.81,532	31,52,949	95,34,416	140,68,897	4,30,119	29,04,558	101.18,583	6,15,637	
	GRAND TOTAL ...	33,24,256	88,85,880	104,42,098	226,52,234	32,86,656	79,41,370	101,18,583	13,05,625	

Abstract for Reserved Forests.

Trees (Deodar)	3,800	..	...	3,800	...	..	...	3,800
Logs ,, ...	4,35,219	42,951	...	4,78,170	4,78.170	...	...	...
Sleepers, B. G. (Deodar) ...	3,11,230	5,153	...	3,16,383	3,16,383	...	...	...
Sleepers, N. G. ,, ...	2,571	...	...	2,571	2,571	...	...	...
Scantlings, (Deodar)	11.063	...	..	11,063	11.063	...	...	...
Boxwood logs	2,878	...	...	2,878	2,878	...	...	...
Logs, (Pine and others)	21,374	500	...	21,874	21,874	...	...	...
Scantlings ,, ...	14,366	...	...	14,366	14,366	...	...	...
Shingles ,, ...	1,921	...	..	1,921	1.921	...	...	...
Miscellaneous trees	1,93,977	...	230	1,94,207	24,680	1,64,427	...	5,100
Poles and Ballas	1,775	246	60	2,081	...	2,081	...	...
Slabs and miscellaneous pieces ...	90	...	...	90	80	10	...	...
Firewood	8,96,803	55,49,218	9,07,392	73,53,413	18,85,670	47,86,655	...	6,81,088
Charcoal	10,773	8	...	10,781	10,781	...	...	...
Total ...	19,07,840	55,98,076	9,07,682	84,13,598	27,70,437	49,53,173	..	6,89,988

Abstract for Protected Forests.

Miscellaneous trees	9,010	...	...	9,010	...	9,010	..	...
Firewood	25,512	1,34,855	...	1,60,367	86,100	74,267	..	...
Poles	362	...	...	362	..	362	..	...
Total ...	34,884	1,34,855	...	1,69,739	86,100	83,639	...	...

Abstract for Unclassed State Forests.

Trees (Deodar)	30,055	...	..	30,055	..	450	14,155	15,450
Logs ,, ...	37,326	...	...	37,326	37.326	...	...	...
Sleepers, B. G. (Deodar)	29,526	17,315	...	46,841	46,654	187	..	...
,, N. G. ,, ...	596	736	...	1,332	1.332	...	...	...
Scantlings, ,, ...	310	...	...	310	310	...	...	...
Miscellaneous trees	12,16,865	270	3,479	12,20,614	..	1,05,909	5,14,638	6,00,067
Poles ,, ...	55,732	4,827	..	60,559	..	4,827	55,732	...
Miscellaneous pieces	1.972	2,854	129	4,955	...	4,835	...	120
Firewood	9,150	31,26,947	95,30,808	126,66,905	3,44,497	27,88,350	95,34,058	...
Total ...	13,81,532	31,52,949	95,34,416	140,68,897	4,30,119	29,04,558	101,18,583	6,15,637
GRAND TOTAL ...	33,24,256	88,85,880	104,42,098	226,52,234	32,86,656	79,41,370	101,18,583	13,05,625
TOTAL FOR 1885-86 ...	36,44,391	61,83,751	2,00,141	1,00,28,283	28,81,296	67,22,491	2,36,916	1,88,480

Annual Form No. 55.

FOREST DEPARTMENT, PUNJAB.

Outturn of Minor Forest Produce during the year 1886-87.

Division.	Description of Produce.	PRODUCE REMOVED OR UTILIZED.										Remarks.
		By Government Agency.		*By Purchasers.*		*By free grants.*		*By Right-holders.*		*Total.*		
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
			Rs.		Rs.		Rs.		Rs.		Rs.	
				RESERVES.								
HAZARA ...	Grazing (acres)	...	...	35,402	1,194	...	...	7,510	235	42,912	1,429	
	,, (No. of cattle)	...	...	606	84	...	...	...	...	606	84	
	Grass cutting (acres)	...	...	40,200	3,500	...	...	5,984	440	46,184	3,940	
	,, ,, (permit loads)	...	...	31,230	1,600	...	...	...	...	31,230	1,600	
	,, ,, (,, men)	...	...	221	358	...	...	...	...	221	358	
	Hay (maunds)	100	...	...	...	...	...	...	...	100	...	
	Turpentine ,,	15	110	...	...	...	...	...	...	15	110	
	Kuth roots ,,	12	91	...	...	...	...	...	...	12	91	
	Chir bark ,,	...	...	140	70	...	...	...	...	140	70	
	Mushk bala ,,	...	...	50	25	...	...	...	...	50	25	
	Imli and Bhan leaves (loads)	...	...	279	70	...	...	...	...	279	70	
	Other minor produce	...	...	...	13	...	...	...	...	...	13	
RAWALPINDI ...	Grazing (acres)	...	...	7,898	133	...	...	2,031	44	9,929	177	
	Grass cutting (acres)	...	...	11,062	878	...	...	...	...	11,062	878	
	,, ,, (maunds)	...	...	10,023	442	...	...	...	...	10,023	442	
	Bamboos (No.)	...	...	2,700	144	...	...	...	...	2,700	144	
	Sanatha and Pattaki branches (No.)	...	...	675	7	...	...	...	...	675	7	
	,, ,, marwan do. (loads)	...	...	2,230	81	...	...	...	...	2,230	81	
	Babar grass (maunds)	...	...	1,147	93	...	...	...	...	1,147	93	
CHAMBA ...	Grass (loads)	...	...	5,648	177	...	...	...	...	5,648	177	
	Deodar seedlings (No.)	...	...	400	25	...	...	...	...	400	25	

KANGRA ...	Grazing (acres)	...	...	...	...	...	...	1,669	191	...	...	...	...	1,669	191
	Grass cutting (acres)	...	...	...	...	...	...	29,435	1,853	...	...	...	...	29,435	1,853
	Bamboos	...	...	...	...	...	6,95,177	13,186	2,137	22	...	...	...	6,97,314	13,208
	Stones and other minor produce			...	...	...	...	...	..	20	...	...	...	...	20
JHELUM ...	Grazing (acres)	...	...	...	...	...	...	...	1,91,886	8,443	...	...	...	1,91,886	8,443
	„ (permits)	...	...	...	...	...	...	...	1,447	1,735	12	144	...	1,459	1,879
	Kahi and pilchi (maunds)		...	...	...	...	...	...	2,899	222	...	...	...	2,899	222
	Stone (c. ft.)	...	...	...	...	...	...	...	40,587	101	...	...	...	40,587	101
	Other minor produce	...	...	...	...	...	...	...	...	48	...	...	...	...	48
CHENAB ...	Grazing (acres)	...	...	...	...	...	...	...	...	10,338	...	...	...	...	10,338
	Grass (maunds)	...	...	...	...	...	...	...	5,611	349	...	...	...	5,611	349
	Panni Kahi Kana and Pilchi		...	...	...	...	...	...	538	41	...	...	...	538	41
LAHORE ...	Grazing (acres)	...	...	...	...	...	...	...	1,580	751	...	...	...	1,580	751
	Grass (acres)	...	...	...	...	...	...	...	9,925	2,704	—	...	...	9,925	2,704
	Moonj, Kana (acres)	...	...	...	...	...	...	...	4,614	1,118	...	...	...	4,614	1,118
MULTAN ...	Grazing (No. of cattle)	...	...	...	...	...	...	...	15,057	2,143	...	...	...	15,057	2,143
	„ (lease)	...	...	...	...	...	...	...		1,225	...	...	...	...	1,225
	Grass (loads)	...	...	...	...	...	...	...	3,937	222	...	...	...	3,937	222
	„ (maunds)	...	...	...	...	...	564	145	...	...	...	...	...	564	145
	Moonj, Kana	...	...	...	...	...	...	...	...	59	...	...	...	...	59
	Pilloo, Lotus and fishing leases	...	...	...	...	...	...	...	...	30	...	...	...	...	30
MONTGOMERY ...	Grazing (acres)	...	...	...	...	...	...	...	...	1,667	...	...	...	...	1,667
	Grass (maunds)	...	...	...	...	...	...	...	439	250	...	...	...	439	250
	„ (loads)	...	...	...	...	...	...	...	295	160	...	...	...	295	160
	Moonj, Kana (acres)	...	...	...	...	...	...	...	...	378	...	...	...	...	378
PHILLOUR ...	Grass cutting (acres)	...	...	...	...	...	...	...	3,229	1,201	...	...	...	3,229	1,201
	Bamboos (No.)	...	...	...	...	...	...	...	5,840	46	...	...	...	5,840	46
	Bhabar, poola grass (loads)		...	...	...	...	...	...	459	66	...	...	...	459	66
	Total					...	...	18,532	...	44,277	...	144	719	...	58,672
									Protected Forests.						
RAWALPINDI ...	Grazing (acres)	...	...	...	...	...	...	...	12,872	368	...	...	...	12,872	368
	Grass cutting (maunds)	...	...	...	...	...	...	...	106	7	...	...	...	106	7
	Aula leaves (loads)	...	...	...	...	...	...	...	283	80	...	...	...	283	80
	Babar grass (maunds)	...	...	...	...	...	...	...	412	15	...	...	...	412	15
	Other minor produce	...	...	...	...	...	...	...	...	61	...	...	...	...	61
	Carried over					...				531					531

[No.]

Annual Form No. 55.

FOREST DEPARTMENT, PUNJAB.

Outturn of Minor Forest Produce during the year 1886-87.

Division.	Description of Produce.	PRODUCE REMOVED OR UTILIZED.										Remarks.
		By Government Agency.		By Purchasers.		By free grants.		By Right-holders.		Total.		
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
			Rs.		Rs.		Rs.		Rs.		Rs.	
	Brought forward				531						531	
CHENAB ...	Grazing	...	...	...	14,104	...	...	...	...	...	14,104	
	Grass	...	...	1,200	75	...	...	...	...	1,200	75	
	Pani, Kahi, Kana and Pilah	...	...	48	3	...	...	...	...	48	3	
		...	...	...	14,713	...		...	...	...	14,713	
				Unclassed State Forests.								
RAWALPINDI ...	Grazing	...	...	...	...	...	10,089	...	...	...	10,089	
	Grass cutting (acres)	...	...	580	700	...		...	...	580	700	
	Sanatha branches and other minor produce	...	...	...	...	...	68	...	...	...	68	
KANGRA. ...	Grass cutting (acres)	...	...	2,700	18	...	...	...	...	2,700	18	
	Grazing („)	...	...	1,00,000	1,140	...	...	...	...	1,00,000	1,140	
	„ (No. of cattle)	...	...	1,26,640	2,177	...	...	...	...	1,26,640	2,177	
	Bamboos	31,000	560	837	6	...	...	8,325	22	40,162	588	
KULU	Grass (loads)	...	...	516	15	...	...	...	...	516	15	
	Grazing (acres)	...	...	...	104	...	...	...	...	...	104	
JHELUM ...	Grazing (acres)	...	...	1,35,248	4,730	...	...	...	...	1,35,248	4,730	
	Moonj and Nar (maunds)	...	...	423	45	...	...	...	...	423	45	
	Stones (c ft.)	...	...	2,400	6	...	...	...	...	2,400	6	

CHENAB ...	Grazing ...	...	...	...	28,381	...	...	...	...	...	...
	Grass ...	...	...	2,994	247	...	...	...	...	3,994	247
	Panni, Kahi, Kana, Pilchi ...	...	...	2,160	135	...	...	...	...	2,160	135
LAHORE ...	Grass (acres) ...	...	...	2,552	1,328	...	...	...	...	2,552	1,328
	Grazing " ...	...	...	1,65,165	21,576	...	...	...	...	1,65,165	21,576
	Moonj, Kana " ...	...	...	25,970	1,130	...	...	...	...	25,970	1,130
	Kankar " ...	...	...	1	32	...	...	...	...	1	32
MULTAN ...	Grazing (No. of cattle) ...	...	...	23,980	1,412	...	...	...	...	23,980	1,412
	" (acres) ...	...	...	.	1,850	...	...	...	...	...	1,850
	Moonj, Kana " ...	...	...	...	132	...	...	...	...	...	132
	Sajji, dates and fishing leases ...	...	...	..	86	...	...	...	...	...	86
	Grazing (acres) ...	...	...	4,87,764	14,774*	...	...	...	...	4,87,764	14,774
MONTGOMERY ...	Main (acres) ...	...	...	4,87,764	685†	...	...	...	...	4,87,764	685
	Other minor produce ...	...	...		22	...	...	...	...	..	22
PHILOUR	Grazing (acres) ...	...	...	1,304	300	...	...	...	..	1,304	300
	" (No of cattle) ...	...	...	87	86	...	...	...	...	87	86
	Grass cutting (acres) ...	...	...	225	900	...	...	...	...	225	900
	" (permits) ...	...	...	560	200	...	...	...	...	560	200
		.	560	.	92,217	..	10,157	.	22	...	1,02,956
	Abstract for Revised Forests.										
	Grazing ...	...	...	...	27,904	...	144	...	279	...	28,327
	Grass and hay ...	...	145	...	13,694	...	...	...	440	...	14,279
	Bamboos ...	...	13,186	...	212	...	...	...	...	..	13,398
	Other minor produce ...	...	201	...	2,467	...	...	...	...	...	2,668
	Total ...		13,532	..	44,277	...	144	.	719	...	58,672
	Abstract for Unclassed State Forests.										
	Grazing ...	...	...	...	86,530	..	10,089	...	...	...	96,619
	Grass and hay ...	...	...	...	3,408	..	...	..	...	...	3,408
	Bamboos ...	...	560	...	6	...	...	...	22	...	588
	Other minor produce ...	...	...	...	2,273	.	68	...	...	...	2,341
	Total ...	...	560	...	92,217	...	10,157	...	22	...	1,02,956
	Carried over ...	...	14,092	...	1,36,494	...	10,301	...	741	...	1,61,628

* Rs. 18,703 realized of which Rs. 3,929 old outstandings.

† Only Rs. 608 realized Rs. 77 are outstanding.

Annual Form No. 55.

FOREST DEPARTMENT, PUNJAB.

Outturn of Minor Forest Produce during the year 1886-87.—Concluded.

Division.	Description of Produce.	PRODUCE REMOVE OR UTILIZED.										REMARKS.
		By Government Agency.		*By Purchasers.*		*By free grants.*		*By Right-holders.*		*Total.*		
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
	Brought forward ...		Rs. 14,092		Rs. 1,36,494		Rs. 10,301		Rs. 741		Rs. 1,61,628	
	Abstract for protected Forest.											
	Grazing	...	...	...	14,472	...	...	...	...	...	14,472	
	Grass	...	..	..	82	...	...	...	...	...	82	
	Other minor produce	...	...	...	159	...	...	..	...	...	159	
	Total ...	...	...	...	14,713	...	...	...	...	...	14,713	
	GRAND TOTAL ...	...	14,092	...	1,51,207	...	10,301	...	741	...	1,76,341	

Add—		Rs.	Rs.	
Phillour.—Bamboos bought for rafting and re-sold	...	275	1,76,341	
Montgomery.—Outstanding of former years	...	4,052		
Kangra.— do. do. do.	...	577		
Lahore.— do. do. do.	...	1,422		
Rawalpindi.— do. do. do.	...	197		
Jhelum.— do. do. do.	...	98		
Lahore.—Amount realised under Section 67	...	11		
Jhelum.—Advance on account grazing 1887-88	...	642		
Kulu.—Wrongly entered by C. G. under R. I. E.	...	41		
Kangra.—Rs. 22 paid by Right-holders	...	22		
Bamboos *bought and re-sold*	...	35		
			7,372	
			1,83,713	
Deduct.—Montgomery still outstanding	...	77		
Jhelum Do.	...	317		
Hazara Do.	...	38	432	
			1,83,281	
Deduct Value of Free grants and right-holders	...		11,042	1,72,239 Total Receipts R. Ic. Ie. IIc. IId. IIs.

Annual Form No. 56.—[*Prescribed.*]

FOREST DEPARTMENT, PUNJAB.

Account of Timber and other Produce cut or collected by Government agency and brought to Sale Depôts or sold locally during the year 1886-87.

PARTICULARS.	No. or quantity.	Cubic feet.	TOTAL OF EACH HEAD. No. or quantity.	TOTAL OF EACH HEAD. Cubic feet.
TIMBER.				
BALANCE IN HAND AT COMMENCEMENT OF THE YEAR.				
Chamba Division.				
Deodar logs ...	13	398		
,, scantlings,	6,435	6,470		
B. G. sleepers ...	418	1,176		
Pine logs ...	10	372		
Pine and other scantlings ...	1,377	1,212		
			8,253	9,628
Kangra Division.				
Deodar logs ...	611	24,396		
B. G. sleepers ...	12,280	42,612		
N. G. ,, ...	7,791	14,587		
Boxwood logs ...	10	6		
Pine ,, ...	4	150		
Other scantlings ...	12	47		
Scraps and pieces,	76	...		
Drift and waif wood	475	273		
			21,259	82,071
Bashahr Division.				
Deodar scantling...	408	470		
Boxwood logs ...	2,988	1,992		
			3,396	2,462
Jhelum Division.				
Deodar logs ...	35	683		
Pine ,, ...	2	43		
Scraps & pieces ...	2	23		
			39	749
Multan Division.				
Deodar logs ...	20	242		
B. G. sleepers ...	6	19		
Pine and other logs	2	17		
Scraps and pieces	60	31		
			88	309
Phillour Division.				
N. G. sleepers ...	2,209	3,314		
Boxwood logs ...	24	...		
Scraps and pieces...	316	474		
			2,549	3,788
Total Balance ...	...	...	35,584	99,007
Carried over ...	...	...	35,584	99,007

PARTICULARS.	No. or quantity.	Cubic feet.	TOTAL OF EACH HEAD. No. or quantity.	TOTAL OF EACH HEAD. Cubic feet.
REMOVED BY PURCHASERS FROM DEPÔTS.				
Deodar logs ...	20,055	4,64,075		
,, scantlings	3,232	4,279		
B. G. sleepers ...	82,081	2,74,969		
N. G. ,, ...	1,643	3,081		
Boxwood logs ...	372	336		
Pine and other logs	2,774	50,604		
,, ,, ,,	9,315	12,206		
Scantlings ...	...	...		
Miscellaneous pieces	6,190	13,924		
Drift and waif ...	589	737		
			1,26,251	8,24,211
USED BY THE DEPARTMENT FROM DEPÔTS.				
Deodar logs ...	46	1,540		
,, scantlings	268	255		
B. G. sleepers ...	8	27		
Boxwood logs ...	3	6		
Pine ,, ..	5	137		
Pine and other scantlings ..	256	232		
Chil karries and ballas ..	4	2		
Scraps and pieces	156	347		
Drift and waif ...	8	16		
			754	2,562
RETURNED TO OWNERS.				
Drift and waif ...	923	1,384		
			923	1,384
MADE OVER TO CONTRACTORS.				
Chil ballas ...	4	...		
Miscellaneous pieces	115	630		
			119	630
TRANSFERRED TO SALE DEPÔTS.				
Deodar logs ...	318	7,066		
B. G sleepers ...	13,864	47,108		
N. G. ,, ...	769	1,599		
Pine logs ...	13	327		
Other scantlings...	3	9		
Scraps ...	148	239		
			15,115	56,349
Carried over ...	...	...	1,43,162	8,85,135

Annual Form No. 56.—[*Prescribed.*]

FOREST DEPARTMENT, PUNJAB.

Account of Timber and other Produce cut or collected by Government agency and brought to Sale Depôts or sold locally during the year 1885-86.—continued.

PARTICULARS.	No. or quantity.	Cubic feet.	TOTAL OF EACH HEAD. No. or quantity.	TOTAL OF EACH HEAD. Cubic feet.
Brought forward ...	...	...	35,584	99,007
RECEIVED FROM THE FORESTS DURING THE YEAR.				
Deodar logs ...	20,111	4,66,642		
,, scantlings ..	3,215	3,843		
Double sleepers ...	6	37		
B. G. sleepers ...	70,780	2,35,757		
N. G. ,, ...	1,054	1,880		
Boxwood logs ...	4,810	2,994		
Pine and other logs	3,527	73,105		
Do. do. scantlings ...	9,362	12,327		
Miscellaneous pieces	5,697	13,744		
Drift & waif pieces	1,137	2,256		
			1,19,699	8,12,585
RECEIVED BY TRANSFER FROM OTHER CLASSES.				
Deodar logs ...	17	85		
B. G. sleepers ...	15	52		
N. G. ,, ...	1	1		
Pine logs ...	2	23		
Scraps and pieces	600	1,028		
			635	1,189
RECEIVED BY OMISSIONS IN FORMER RETURNS.				
N. G. sleepers ...	...	3		
Boxwood logs ...	...	19		
Scraps and pieces	...	80		
			...	102
RECEIVED BY TRANSFER FROM SALE DEPÔTS.				
Deodar logs ...	318	7,066		
B. G. sleepers ...	13,864	47,108		
N. G. ,, ...	769	1,599		
Pine logs ...	13	327		
Other scantlings ...	3	9		
Scraps ...	148	239		
			15,115	56,348
RECEIVED FROM THE FORESTS AND SOLD LOCALLY.				
Deodar logs ...	279	7,404		
B. G. sleepers ...	546	1,894		
Pine trees ...	30	187		
,, logs ...	535	25,925		
,, sleeper ...	2	8		
Pine and other scantling, ...	4,179	5,903		
Ballas, Kurries and Poles ...	988	655		
Miscellaneous pieces	464	502		
			7,023	42,478
Carried over ...	...	...	1,78,056	10,11,709

PARTICULARS.	No. or quantity.	Cubic feet.	TOTAL OF EACH HEAD. No. or quantity.	TOTAL OF EACH HEAD. Cubic feet.
Brought forward ...	...	...	1,43,162	8,85,135
TRANSFERRED TO OTHER CLASSES.				
Deodar logs ...	2	23		
B. G. sleepers ...	291	1,010		
Pine logs ...	2	25		
Scraps and pieces	40	110		
			335	1,168
LOST BY REMEASUREMENT STRUCK OFF OR OTHER CAUSES.				
Deodar logs ...	...	42		
B. G. sleepers ...	18	62		
Pine logs ...	1	5		
,, scantlings ...	4	6		
Tors, ballas &c. ...	27	54		
			50	169
USED BY DEPARTMENT LOCALLY.				
Deodar logs ...	2	33		
Pine do. ...	2	42		
Pine and other scantlings ...	78	127		
Tors, ballas and bullees ..	21	46		
Scraps and pieces	4	16		
			107	264
SOLD LOCALLY.				
Deodar logs ...	279	7,404		
B. G. sleepers ...	546	1,894		
Pine trees ...	30	187		
,, logs ...	535	25,925		
,, sleepers ...	2	8		
,, and other scantlings ...	4,179	5,903		
Ballas, kurries and poles ...	988	655		
Miscellaneous pieces	464	502		
			7,023	42,478
TIMBER RECEIVED IN FOREST CASES.				
Scantlings ...	38	40	38	40
BALANCE AT CLOSE OF THE YEAR.				
Chamba Division.				
Deodar logs ...	26	730		
,, scantlings	6,150	5,779		
B. G. sleepers ...	397	1,104		
Pine logs ...	753	22,667		
Pine and other scantlings ...	1,091	946		
			8,417	31,226
Carried over ...	...	...	1,59,132	9,60,480

Annual Form No. 56.—[*Prescribed.*]

FOREST DEPARTMENT, PUNJAB.

Account of Timber and other Produce cut or collected by Government agency and brought to Sale Depôts or sold locally during the year 1886-87.

PARTICULARS.	No. or quantity.	Cubic feet.	TOTAL OF EACH HEAD. No. or quantity.	TOTAL OF EACH HEAD. Cubic feet.
Brought forward ...	...	...	1,78,056	10,11,709
TIMBER RECEIVED IN FOREST CASES.				
Scantlings ...	38	40		
			38	40
RECEIVED LOCALLY AND USED BY DEPARTMENT.				
Deodar logs ...	2	83		
Pine ,, ...	2	42		
Pine and other scantlings ...	78	127		
Tors, ballas and ballies ...	21	46		
Scraps and pieces	4	16		
			107	264
GRAND TOTAL ...	...	...	1,78,201	10,12,013
Total for 1885-86...	...	...	1,34,930	7,71,340

PARTICULARS.	No. or quantity.	Cubic feet.	TOTAL OF EACH HEAD. No. or quantity.	TOTAL OF EACH HEAD. Cubic feet.
Brought forward ...	..	...	1,59,132	9,60,480
Kangra Division.				
Deodar logs ...	625	23,069		
N. G. sleepers ...	6,954	13,017		
Boxwood logs ...	10	6		
Pine and other logs	10	185		
Other scantlings...	84	188		
Miscellaneous pieces	94	77		
Drift and waif ...	92	392		
			7,869	36,034
Bashahr Division.				
Deodar scantlings	408	470		
Boxwood logs ...	7,423	4,644		
			7,831	5,114
Jhelum Division.				
Deodar logs .	52	2,959		
,, scantlings (double sleepers).	6	37		
B. G. sleepers ...	65	228		
Pine logs ...	3	95		
Shisham pieces ...	2	3		
			128	3,322
Chenab Division.				
B. G. sleepers ...	3	9	3	9
Multan Division.				
Deodar logs ...	1	8		
			1	8
Phillour Division.				
B. G. sleepers ...	636	2,207		
N. G. ,, ...	2,458	3,687		
Boxwood logs ...	24	19		
Scraps and pieces,	119	233		
			3,237	6,146
GRAND TOTAL ...	...	...	1,78,201	10,12,013
Total for 1885-86 ..	...	...	1,34,930	7,71,340

ABSTRACT.

Balance in hand at commencement of the year ...	..	...	33,584	99,007
Received from the forest in depôts during the year.	...	...	1,19,699	8,12,585
Received by transfer from other classes ...	...	...	635	1,189
Received by omissions in former returns ...	...	...	..	102
Received by transfer from sale depôts ...	...	...	15,115	56,348
Received from the forests and sold locally ...	...	...	7,023	42,478
Timber received in forest cases ...	...	...	38	40
Received locally and used by Department ...	...	...	107	264
TOTAL ..	...	...	1,78,201	10,12,013
Total for 1885-86...	...	...	1,34,930	7,71,340

Removed by purchasers from depôts ...	...	..	1,26,251	8,24,211
Used by the Department from depôts ...	...	...	754	2,562
Returned to owners ...	...	...	923	1,384
Made over to contractors ...	...	...	119	630
Transferred to sale depôts ...	...	..	15,115	56,348
Transferred to other classes ...	...	...	335	1,168
Lost by remeasurement, struck off or other causes...	...	...	50	169
Used by Department locally ...	...	..	107	264
Sold locally ...	...	..	7,023	42,478
Timber received in forest cases ...	...	..	38	40
Balance at close of the year ...	...	...	27,486	32,759
TOTAL ...	...	..	1,78,201	10,12,013
Total for 1885-86 .	...	...	1,34,930	7,71,340

Annual Form No. 56.—[*Prescribed.*]

FOREST DEPARTMENT, PUNJAB.

Account of Timber and other Produce cut or collected by Government agency and brought to Sale Depôts or sold locally during the year 1886-87.

FIREWOOD AND CHARCOAL.

PARTICULARS.	No. of quantity.	Cubic feet.	TOTAL OF EACH HEAD. No. or quantity.	TOTAL OF EACH HEAD. Cubic feet.
BALANCE IN HAND AT COMMENCEMENT OF THE YEAR.				
Rawalpindi Division.				
Charcoal, mds. ...	3,233	...	3,233	...
Lahore Division.				
Firewood, c. ft. ...	...	4,07,002	...	4,07,002
RECEIVED FROM THE FORESTS IN DEPÔTS.				
Firewood, pieces ...	415	...	415	..
,, c. ft. ...	....	15,83,395	...	15,83,395
,, mds. .	4,967	..	4,967	.
Charcoal ,, ...	9,920	...	9,920	...
RECEIVED FROM THE FOREST AND SOLD LOCALLY.				
Firewood, pieces ..	85	...	85	..
,, c. ft. ..	...	4,30,305	...	4,30,305
,, mds. ..	2,451	...	2,451	...
,, loads ...	16	...	16	...
Charcoal, mds. ..	661	.	661	..
Grass, ,, ...	623	...	623	...
RECEIVED FROM THE FOREST LOCALLY AND USED BY DEPARTMENT.				
Firewood, c. ft. ...	...	200	...	200
Do. pieces ...	22	...	22	..
TOTAL ...	22,393	24,20,902	22,393	24,20,902
Total for 1885-86 ..	19,608	16,96,795	19,608	16,96,795

PARTICULARS.	No. or quantity.	Cubic feet.	TOTAL OF EACH HEAD. No. or quantity.	TOTAL OF EACH HEAD. Cubic feet.
REMOVED BY PURCHASER FROM DEPÔTS.				
Firewood, pieces...	415	...	415	..
,, c. ft	...	12,43,975	...	12,43,975
,, mds. ...	4,951	...	4,951	...
Charcoal, ,, ...	11,512	...	11,512	...
USED BY DEPARTMENT.				
Firewood, pieces..	22	...	22	.
,, c. ft. ...	...	800	...	800
,, mds. ..	16	...	16	.
Charcoal, ,, . .	6	..	6	...
LOST BY RE-MEASUREMENT AND DRYAGE, &C., &C.				
Firewood, c. ft. ...	...	55,945	...	55,945
Charcoal, mds. ...	76	...	76	...
Grass ,, ...	59	...	59	..
SOLD LOCALLY.				
Firewood, pieces...	85	...	85	.
,, c. ft. ..	...	4,30 305	...	4,30,305
,, mds. ...	2,451	...	2,451	...
,, ,, ...	16	...	16	...
Charcoal, mds. ...	661	...	661	...
Grass ,, ...	564	...	564	...
USED LOCALLY.				
Firewood, c. ft. ...	...	200	...	200
BALANCE AT CLOSE OF YEAR.				
Rawalpindi Division.				
Charcoal, mds. ...	1,559	...	1,559	...
Lahore Division.				
Firewood, c. ft. ...	...	6,89,677	. .	6,89,677
TOTAL ...	22,393	24,20,902	22,393	24,20,902
Total for 1884-85...	19,608	16,96,795	19,608	16,96,795

Annual Form No. 56.—[*Prescribed.*]

FOREST DEPARMENT, PUNJAB.

Account of Timber and other Produce cut or collected by Government agency and brought to Sale Depôts or sold locally during the year 1886-87.—concluded.

BAMBOOS.

PARTICULARS.	No. or quantity.	Cubic feet.	TOTAL OF EACH HEAD. No. or quantity.	TOTAL OF EACH HEAD. Cubic feet.	PARTICULARS.	No. or quantity.	Cubic feet.	TOTAL OF EACH HEAD. No. or quantity.	TOTAL OF EACH HEAD. Cubic feet.
BALANCE IN HAND AT COMMENCEMENT OF THE YEAR.					REMOVED BY PURCHASERS.				
					Bamboos ...	7,39,632	...	7,39,632	...
Kangra Division.					USED BY DEPARTMENT.				
Bamboos ...	223	...	223	...					
					Bamboos ...	2,009	...	2,009	...
Phillour Division.					USED BY DEPARTMENT LOCALLY.				
Bamboos ...	1,396	...	1,396	...					
					Bamboos ..	1,312	...	1,312	...
RECEIVED FROM FORESTS IN DEPÔTS.					STRUCK OFF AS USELESS.				
Bamboos ...	7,40,224	...	7,40,224	...	Bamboos	190	...	190	...
RECEIVED LOCALLY AND USED BY DEPARTMENT.					BALANCE AT CLOSE OF THE YEAR.				
					Phillour Division.				
Bamboos ...	1,312	...	1,312	...	Bamboos ..	12	...	12	...
TOTAL ...	7,43,155	...	7,43,155	...	TOTAL ...	7,43,155	...	7,43,155	...
Total for 1885-86...	8,63,806	...	8,63,806	...	Total for 1885-86...	8,63,806	...	8,63,806	...

SHINGLES, &c.

BALANCE IN HAND AT COMMENCEMENT OF THE YEAR.					SOLD FROM DEPOTS.				
					Shingles ...	2,60,636	1,694	2,60,636	...
Shingles ...	7,175	...	7,175	...	USED BY DEPARTMENT.				
RECEIVED FROM FORESTS IN DEPOTS.					Shingles ...	1,200	8	1,200	...
Shingles ...	2,95,553	1,967*	2,95,553	...	SOLD LOCALLY.				
Kath roots, mds. ...	9	...	9	...	Turpentine, mds ...	8	...	8	...
RECEIVED FROM FORESTS AND SOLD LOCALLY.					Hop poles, No. ...	1,054	...	1,054	...
					LOST BY DRYAGE.				
Turpentine, mds....	8	...	8	..	Kuth roots, mds...	9	...	9	...
Hop poles, No. ..	1,054	...	1,054	...	BALANCE AT CLOSE OF THE YEAR. *Hazara Division.*				
					Shingles ...	40,892	265	40,892	...
TOTAL ...	3,03,799	1,967	3,03,799	...	TOTAL ...	3,03,799	1,967	3,03,799	...
Total for 1885-86...	4,17,606	...	4,17,606	...	Total for 1885-86...	4,17,606	...	4,17,606	...

* 46 c. ft. omitted in the balance of last year.

Annual Form No. 57.—[*Prescribed.*]

Forest Department, Punjab.

Abstract showing the value of Timber and other Produce at Sale Depôts for the year 1886-87.

Description of Timber and other produce.	On hand at commencement of the year.			On hand of close at the year.			Difference in value.	
	No.	Cubic feet.	value.	No.	Cubic feet.	value.	In favor of the year.	Against the year.
			Rs.			Rs.	Rs.	Rs.
Deodar timber (logs)	670	25,719	20,845	704	26,766	22,767	1,922	...
Pine ,, ...	17	573	179	789	22,058	8,663	8,484	...
Deodar scantlings	6,843	6,940	6,940	6,564	6,286	6,169	..	771
Pine , and others	1,389	1,259	629	1,175	1,134	499	...	130
B. G. sleepers	12,704	43,807	38,112	1,101	3,548	2,592	...	35,520
N. G. sleepers	10,000	17,901	12,500	9,412	16,704	10,842	...	1,658
Boxwood pieces	3,022	1,998	9,098	7,433	4,650	14,719	5,621	...
Other wood ,, ...	1	9	2	7	20	7	5	..
Scraps and pieces	454	528	113	209	301	68	..	45
Drift and waif	475	273	400	92	392	150	...	250
Shingles	...	...	..	40,892	265	250	250	...
Total Timber ...	35,584	99,007	88,818	68,378	83,024	66,726	...	22,092
For 1885-86 ...	19,178	1,44,660	87,621	35,584	99,007	88,818	1,197	...
Bamboos	1,619	...	76	12	...	12	...	64
Firewood (cubic feet)	...	4,07,002	5,863	..	6,89,677	17,000	11,137	...
Charcoal (maunds)	3,233	..	3,082	1,559	...	1,559	...	1,523
Total ...	4,852	4,07,002	9,021	1,571	6,89,677	18,571	9,550	...
For 1885-86 ..	2,922	1,73,400	8,322	4,852	4,07,002	9,021	699	..
Grand Total ...	...	...	97,839		...	85,297	...	12,542
Total for 1885-86 ...	...	...	95,943	...	...	97,839	1,896	...

Annual Form No. 58.

FOREST DEPARTMENT, PUNJAB.

Summary of Revenue of the different Divisions for 1886-87.

BUDGET HEADS, RECEIPTS.	Direction Division.	Bashahr Division.	Phillour Division.	Kulu Division.	Kangra Division.	Chamba Division.	Lahora Division.	Montgomery Division.	Multan Division.	Chenab Division.	Jhelum Division.	Rawalpindi Division.	Hazara Division.	TOTAL.
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY :—	Rs. A P	Rs. A P	Rs. A P	Rs. A P	Rs. A P	Rs. A P	Rs. A P	Rs. A P	Rs. A P	Rs. A P	Rs. A P	Rs. A P	Rs. A P	Rs. A P
a. Timber	...	1,253 7 4	1,50,930 5 9	...	1,68,358 11 11	1,84,011 6 1	...	7 6 0	4,319 1 3	1,18,004 15 5	47,287 13 8	627 9 10	6,943 8 0	6,07,750 4 1
b. Firewood and Charcoal	...	...	20 12 6	...	22 0 3	314 1 6	54,147 2 4	...	726 7 2	25,719 10 0	0 13 10	11,454 12 1	3,938 14 11	95,494 9 7
c. Bamboos	...	...	274 11 8	...	13,081 10 11	35 4 0	...	...	...	...	...	...	...	14,291 10 7
d. Sandal-wood	...	...	...	...	...	...	...	...	...	...	...	...	...	...
e. Grass and other minor produce	...	0 4 0	...	40 8 6	...	...	...	...	144 15 0	...	...	...	201 3 11	386 15 5
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS :—														
a. Timber	...	...	...	844 8 0	13,226 5 2	4,142 12 0	...	340 5 0	429 11 0	...	...	7,994 13 8	428 15 0	28,054 5 10
b. Firewood and Charcoal	...	...	121 6 0	...	...	32 4 0	9,609 15 7	1,19,523 2 6	41,849 7 3	1,000 8 3	187 11 2	13,736 3 2	2,894 5 6	1,80,062 15 5
c. Bamboos	...	...	45 10 0	...	50 4 9	...	...	...	...	...	...	142 12 0	...	239 10 9
d. Grazing and Fodder Grass	...	...	2,763 1 6	117 3 9	6,719 2 0	176 3 0	27,792 5 3	20,779 15 4	6,852 7 9	63,494 3 0	15,331 14 0	2,724 8 5	8,659 10 0	1,52,439 15 0
e. Other minor produce	...	...	...	2 0 0	21 1 6	25 0 0	2,280 4 0	1,131 0 0	307 4 0	178 14 0	421 7 6	336 15 6	177 10 3	4,881 8 9
III.—CONFISCATED DEBIT AND WAIF WOOD	...	...	1,917 8 6	22 0 0	182 10 3	362 13 11	...	...	46 13 0	1,337 13 10	9,331 10 10	332 6 10	...	14,031 15 2
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT:—														
a. Duty on foreign timber and other forest produce	...	...	...	...	...	...	...	...	...	...	...	...	892 14 9	2,446 1 3
b. Revenue from shared and private forests ...	...	...	...	...	1,765 2 6	...	...	...	...	...	...	...	...	
V.—MISCELLANEOUS :—														
a. Fines and forfeitures	...	...	10 0 0	1 0 0	30 10 0	...	108 2 3	...	...	...	0 6 0	125 6 0	1,286 15 0	1,540 1 3
b. Refunds...	...	67 0 0	...	...	...	0 3 6	...	14 0 0	...	...	27 0 4	7 3 3	112 6 6	134 13 1
c. Other sources	37 13 0	4 0 0	933 3 10	400 5 9	3,848 7 10	3,505 6 5	1,439 3 6	464 9 3	775 8 10	1,345 5 6	3,446 6 0	1,316 0 10	112 6 6	17,608 13 3
TOTAL RECEIPTS ...	37 13 0	1,344 11 4	1,57,006 11 9	928 0 0	1,41,265 3 0	1,92,666 10 5	96,375 0 11	1,42,260 6 1	52,449 9 2	2,06,679 6 0	76,008 1 11	38,709 6 8	22,526 10 1	11,27,276 10 4

CALCUTTA,
The 26th May 1887.

JAS. TAYLOR,
Asst. Comptroller-General (Forests).

Annual Form No. 53.

FOREST DEPARTMENT, PUNJAB.

Summary of Expenditure of the different Divisions, 1886-87.

BUDGET HEADS.	Direction Division.			Bashahr Division.			Phillour Division.			Kulu Division.			Kangra Division.			Chamba Division.			Lahore Division.			Montgomery Division.			Mooltan Division.			Chenab Division.			Jhelum Division.			Rawalpindi Division.			Hazara Division.			TOTAL.		
A.—CONSERVANCY AND WORKS.	Rs.	A	P	Rs.	A	P	Rs.	A	P	Rs.	A	P	Rs.	A	P	Rs.	A	P	Rs.	A	P	Rs.	A	P	Rs.	A	P	Rs.	A	P	Rs.	A	P	Rs.	A	P	Rs.	A	P	Rs.	A	P
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY :—																																								
a. Timber...	30	12	0	38,035	10	2	13,161	4	3	13,285	4	3	5,454	11	8	1,41,593	13	1	...	...	...	...	...	...	...	...	...	2,888	12	6	4,694	14	8	57	11	8	14,670	9	11	2,43,674	7	11
b. Firewood and Charcoal	26	0	6	...	...	...	5	4	5	...	...	...	3	5	6	...	...	...	14,720	9	1	...	...	...	106	8	0	10,681	11	3	...	...	...	5,050	12	11	2,330	14	5	32,915	11	7
c. Bamboos.	...	...	...	...	...	...	5	7	7	...	...	...	2,890	10	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,896	1	10
d. Sandal-wood	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
e. Grass and other minor produce	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	154	15	6	302	5	6	234	4	6	178	11	0	383	6	5	...	...	...	96	9	2	1,737	4	3
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS	...	...	...	...	...	...	...	...	...	...	...	...	3	7	6	384	0	0	21	12	0	367	15	5	28	0	2	139	14	9	...	...	...	670	12	5	93	0	1	1,708	14	4
III.—CONFISCATED, DRIFT AND WAIF WOOD	...	...	...	...	...	...	649	3	5	...	...	...	171	8	6	...	...	...	...	...	...	...	...	...	43	2	10	1,364	13	1	1,342	14	2	376	5	11	...	...	...	4,447	15	11
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT																																								
a. Duty on foreign timber and other forest produce ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
b. Revenue from shared and private forests ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
V.—RENT OF LEASED FORESTS AND PAYMENTS TO SHAREHOLDERS IN FORESTS MANAGED BY GOVERNMENT ...	...	...	...	10,150	0	0	455	0	0	21	0	0	3,727	3	8	21,000	0	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,790	14	2	37,144	1	10
VI.—LIVE STOCK, STORES, TOOLS AND PLANTS :—																																								
a. Purchase of Cattle	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
b. Feed and keep of Cattle	...	...	...	319	12	3	43	4	7	...	...	...	...	...	...	...	...	...	110	8	6	...	...	...	...	...	...	185	2	6	...	...	...	...	...	...	...	...	...	658	11	4
c. Stores, Tools and Plant	806	0	3	126	15	0	152	11	0	245	4	0	319	12	0	403	12	2	648	13	3	40	2	3	68	12	0	73	3	6	157	0	6	102	4	6	196	1	0	3,250	11	5
VII.—COMMUNICATIONS AND BUILDINGS :—																																								
a. Roads and Bridges	...	...	...	7,795	7	9	281	10	0	612	7	0	68	3	3	2,283	9	0	...	...	...	...	...	...	43	10	0	2	14	0	265	14	6	155	0	0	279	9	1	11,788	4	7
b. Buildings	...	...	...	898	15	11	742	3	11	345	2	6	493	7	10	1,818	4	4	153	5	6	1	14	9	135	11	3	823	7	4	1,060	9	8	150	2	3	151	14	9	6,389	4	0
c. Other works	...	...	...	...	...	...	3	0	6	...	...	...	10	5	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	11	0	...	...	...	24	0	6

VIII.—Demarcation, Improvement and extension of forests :—																					
a. Demarcation	540	12	4	941	4	9	30	2	6	39	9	3	6,832	9	2	350	0	3	961	13	4
b. Compensation for land and rights	...	...	...	143	12	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
c. Surveys and working plans	8	1	6	33	15	0	...	...	...	...	...	...	...	...	...	101	12	0	...	...	...
d. Plantations	...	...	...	614	5	0	4,413	9	3	452	7	9	392	14	3	3,682	10	10	24,392	6	4
e. Protection from fire	...	...	...	78	0	0	256	12	10	44	5	3	205	8	1	87	3	2	...	...	...
f. Other works	...	...	...	100	8	0	65	5	4	203	9	3	...	...	...	330	8	0	852	10	3
IX.—Miscellaneous :—																					
a. Refunds	...	...	...	...	...	...	...	...	...	1	0	6	...	...	...	...	...	...	...	...	...
b. Law charges	0	15	6	...	...	...	...	...	...	...	...	...	1	7	6	19	0	0	...	...	...
c. Other charges	686	1	3	641	9	1	3	11	0	21	8	6	52	13	9	78	2	10	1,462	8	3
Total A.—Conservancy and works ...	2,099	3	10	59,879	9	11	20,268	9	9	15,271	9	9	20,628	0	5	1,72,182	11	8	43,766	6	0
B.—ESTABLISHMENTS.																					
I.—Salaries :—																					
a. Conservators	13,108	3	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
b. Superior officers	10,291	15	9	7,800	0	0	11,022	8	0	7,150	0	0	10,107	11	7	19,451	13	6	9,140	...	...
c. Subordinate forest and depôt establishments ...	50	0	0	4,217	13	10	3,501	3	0	3,884	2	7	7,635	5	7	9,113	1	8	8,463	13	4
d. Office establishments	6,100	9	9	1,232	14	8	1,080	0	0	710	14	6	1,887	0	0	2,228	2	6	1,687	14	0
e. Deputation and special allowances ...	...	...	...	2,400	0	0	...	...	...	...	...	...	...	...	...	120	0	0	...	...	...
II.—Travelling allowances :—																					
a. Conservators	2,694	0	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
b. Superior officers	1,976	12	0	1,800	0	0	1,516	0	6	1,465	8	0	2,166	12	0	3,341	0	0	2,602	4	7
c. Subordinate forest and depôt establishments ...	25	10	8	1,957	15	0	1,056	3	0	818	8	2	1,379	1	11	833	13	3	1,141	3	11
d. Office establishments	765	8	0	624	10	0	347	0	2	265	6	4	572	0	11	120	11	5	473	5	5
III.—Contingencies :—																					
a. Stationery	59	7	0	48	1	0	73	13	0	73	6	6	101	12	6	110	14	8	61	12	0
b. Carriage of tents and Records	792	12	4	181	8	6	73	9	9	201	6	6	635	1	1	396	1	6	69	10	6
c. Rents, rates and Taxes	960	0	0	62	8	0	390	0	0	81	0	0	300	0	0	250	0	0	680	0	0
d. Pay of police guards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
e. Official postage	74	9	0	82	8	0	259	2	6	52	8	6	259	8	0	117	6	6	137	2	0
f. Sundries	1,344	8	8	641	3	3	223	0	7	175	10	2	257	14	9	408	11	5	230	15	3
Total B., Establishments ...	37,910	0	10	20,939	2	3	19,542	8	6	14,878	9	3	25,302	4	4	38,539	12	5	24,818	1	0
Grand Total of Expenditure ...	40,009	4	8	8,0818	12	2	39,811	2	3	30,150	3	0	45,930	4	9	2,08,722	8	1	68,584	7	0

VIII.—Demarcation, Improvement and extension of forests :—																					
a. Demarcation	34	14	6	579	14	3	2,190	11	1	792	14	6	1,421	6	8	353	13	3	15,069	13	10
b. Compensation for land and rights	...	...	...	...	...	...	...	...	...	...	...	...	102	6	0	...	...	...	245	12	0
c. Surveys and working plans	22	0	0	23	6	6	...	...	...	...	...	...	363	13	6	...	...	...	553	0	0
d. Plantations	74	15	0	114	11	6	1,344	10	7	1,253	2	5	140	13	0	1,204	2	4	38,080	12	3
e. Protection from fire	4	10	8	61	3	3	8	7	0	...	...	...	190	11	9	285	13	8	1,249	11	8
f. Other works	69	1	6	363	1	0	364	2	10	120	7	9	23	11	6	5	11	6	2,447	13	1
IX.—Miscellaneous :—																					
a. Refunds	...	...	...	...	...	...	247	14	3	30	0	0	...	...	...	...	...	...	278	14	9
b. Law charges	29	14	6	0	12	6	...	...	...	4	4	3	18	1	0	5	9	6	80	0	9
c. Other charges	4	13	6	14	6	6	54	4	6	...	...	...	49	4	6	96	3	0	3,163	12	8
Total A.—Conservancy and works	989	11	9	1,827	8	3	29,454	11	4	10,606	8	10	8,912	10	2	21,748	13	10	4,07,635	3	6
B.—ESTABLISHMENTS.																					
I.—Salaries :—																					
a. Conservators	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13,108	3	7
b. Superior officers	4,093	3	8	7,800	0	0	6,700	15	6	10,200	0	0	13,209	0	0	12,050	0	0	1,28,969	3	3
c. Subordinate forest and depôt establishments	3,044	11	2	5,376	7	4	10,381	5	10	9,341	4	5	7,760	10	7	7,247	5	2	80,147	4	6
d. Office establishments	791	5	9	1,440	0	0	1,640	0	0	1,701	0	0	1,469	0	9	1,748	3	9	22,905	1	8
e. Deputation and special allowances	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,520	0	0
II.—Travelling allowances :—																					
a. Conservators	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,694	0	10
b. Superior officers	648	6	0	1,290	12	0	1,408	2	0	1,151	10	2	1,910	3	6	1,534	10	0	22,821	0	9
c. Subordinate forest and depôt establishments	396	10	1	787	9	8	1,456	1	0	1,447	13	8	1,413	13	0	958	9	2	13,723	0	6
d. Office establishments	244	10	0	167	9	6	205	4	9	173	2	0	343	12	6	225	9	3	4,518	10	3
III.—Contingencies :—																					
a. Stationery	37	12	0	56	12	2	149	6	11	55	0	6	43	0	11	57	2	2	928	5	4
b. Carriage of tents and Records	106	13	7	226	3	3	138	13	9	159	11	8	130	9	6	331	1	9	3,443	9	8
c. Rents, rates and Taxes	420	0	0	360	0	0	365	12	3	171	8	7	646	15	2	494	0	0	5,161	12	0
d. Pay of police guards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
e. Official postage	103	7	6	164	11	6	268	3	9	223	13	0	314	11	0	215	15	6	2,964	10	9
f. Sundries	226	3	11	221	11	6	556	10	8	279	13	6	140	2	9	268	14	11	4,975	[illegible]	4
Total B., Establishments	10,113	3	8	17,920	12	11	23,360	12	5	25,044	13	6	27,372	15	8	26,131	7	8	3,08,874	8	5
Grand Total of Expenditure	11,102	15	5	19,748	5	2	52,815	7	9	35,650	6	4	36,285	9	10	46,880	5	6	7,16,509	11	11

CALCUTTA,
The 26th May 1887.

JAS. TAYLOR,
Assistant Comptroller-General (Forests.)

Annual Form No. 59,

FOREST DEPARTMENT, PUNJAB.

Account Current for the year 1886-87.

Dr. **Cr.**

		Rs.	A.	P.	Rs.	A.	P.
To *Cash Balance on 1st April* 1886		...	...	...	3,728	7	11
„ *VIII.—Assessed Taxes—*							
Income Tax deductions from salaries		...	...	...	4,418	9	11
„ *Revenue as per Annual Summary* (*Form* 58)		...	...	...	11,27,276	10	4
„ *Service Funds—*							
Civil Fund, Ordinary (Bengal)		155	12	10			
Do. Additional (do.)		171	6	1			
Military Fund (Madras)		1,017	11	4			
Uncovenanted Service Family Pension Fund, Bengal...		2,917	12	0	4,362	10	3
„ *Deposits*		...	...	...	4,210	10	0
„ *Forest Cash Remittances (Local)—*							
Forest Cheques drawn		6,66,221	1	6			
Inter-Divisional Transfers		3,392	14	4	6,69,613	15	10
„ *Advances Recoverable*		...	...	...	4,64,533	8	3
„ *Suspense*		...	...	...	70	0	0
„ *Account Current (other Governments)—*							
Government of India		3,868	1	4			
Do. North-Western Provinces and Oudh ...		2,259	4	9	6,127	6	1
„ *Inter-Departmental Transfers—*							
Public Works Department, other Branches		14,146	5	3			
Civil Departments—							
Survey of India Department	445 12 0						
Mathematical Instrument do. ...	393 6 0						
Jails ... ... do. ...	196 9 0						
Miscellaneous ... do. ...	4,659 11 0	5,695	6	0	19,841	11	3
TOTAL ...		...	...	...	23,04,183	9	10

		Rs.	A.	P.	Rs.	A.	P.
By *Expenditure as per Annual Summary* (*Form* 58) ...		...	...	...	7,16,509	11	11
„ *Deposits*		...	...	...	4,579	13	0
„ *Forest Cash Remittances (Local)—*							
Remittances to Treasuries		7,82,485	8	3			
Inter-Divisional Transfers		3,392	14	4	7,85,878	6	7
„ *Advances Recoverable*		...	...	...	4,41,691	7	0
„ *Suspense*		...	...	...	70	0	0
„ *Account Current (other Governments)—*							
Government of India		5,119	3	4			
Do. „ North-Western Provinces and Oudh ...		10	5	4			
Do. „ Burma		350	0	0	5,479	8	8
„ *Inter-Departmental, Transfers—*							
Public Works Department, State Railways—		...	...	...	...	...	...
North-Western State Railway ...	2,80,560 15 2						
Sind Saugor State Railway	46,498 4 6						
Public Works Department, other Branches	17,102 10 7	3,44,161	14	3			
Military Department, Bengal		900	0	0			
Civil Departments—							
Mathematical Instrument Department ...	25 0 0						
Police ... do. ...	4 0 0						
Miscellaneous ... do. ...	2,387 6 11	2,416	6	11	3,47,478	5	2
„ *Cash Balance on 31st March* 1887		...	...	...	2,496	5	6
TOTAL ...		...	...	...	23,04,183	9	10

CALCUTTA,

The 26th May 1887.

JAS. TAYLOR,

Asstt. Comptroller-General (Forests).

Annual Form No. 60.—[*Prescribed.*]

FOREST DEPARTMENT, PUNJAB.

Revenue received and Outstandings on account of Revenue during 1886-87.

Division.	Particulars.	Outstandings at commencement of year. Rs.	A.	P.	Value of sales and other revenue during year. Rs.	A.	P.	TOTAL. Rs.	A	P.	Amount realised during year. Rs.	A.	P.	Balance due to the Department at end of year. Rs.	A.	P.	REMARKS.
Direction ...	...	...	...	...	37	13	0	37	13	0	37	13	0	...	...	...	(*a*) Rs. 19-0-0, written off *vide* Punjab Government, No. 106, dated 19th March 1887.
Hazara ...	...	20	0	0	23,078	13	3	23,098	13	3	(*a*) 22,544	10	1	554	3	2	(*b*) Rs. 208-0-0 written off *vide* Commissioner, Rawalpindi, No. 3102, dated 1st October 1886.
Rawalpindi ...	...	824	15	10	39,365	4	8	40,190	4	6	(*b*) 38,917	6	8	1,272	13	10	(*c*) Rs. 873-0-0, struck off *vide* Conservator's No. 1512, dated 21st October 1886.
Chamba ...	...	2,508	0	0	1,92,666	10	5	1,95,174	10	5	1,92,666	10	5	2,508	0	0	(*d*) Rs. 635-6-10, struck off *vide* Commissioner's No. 2179, dated 16th June 1886.
Kangra ...	...	2,056	7	4	1,40,601	13	8	1,42,658	5	0	(*c*) 1,42,188	3	0	520	2	0	(*e*) Rs. 7,504-11-0, written off *vide* Financial Commissioner's No. 100, dated 7th January 1887.
Kulu ...	...	...	...	...	928	0	0	928	0	0	928	0	0	...	..	..	Rs. 29-12-0, written off by Commissioner's No. 269, dated 7th August 1886.
Bashahr ...	...	115	7	7	1,229	3	9	1,344	11	4	1,344	11	4	...	...	...	
Jhelum ...	...	98	5	0	76,227	0	11	76,325	5	11	76,008	1	11	317	4	0	
Chenab ...	...	28,558	15	8	2,23,426	4	5	2,51,985	4	1	(*d*) 2,07,314	12	10	44,670	7	3	
Lahore ...	...	2,898	14	4	93,843	7	10	96,742	6	2	95,375	0	11	1,367	5	3	
Mooltan ...	...	...	...	...	52,449	9	2	52,449	9	2	52,449	9	2	...	...	...	
Montgomery ...	...	18,758	8	5	1,45,816	4	3	1,64,574	12	8	(*e*) 1,49,814	13	1	14,759	15	7	
Phillour ...	...	0	10	0	1,57,006	1	9	1,57,006	11	9	1,57,006	11	9	...	...	...	
TOTAL ...	...	55,840	4	2	11,46,676	7	1	12,02,516	11	3	(*f*) 11,36,546	8	2	65,970	3	1	Rs. 9,269-13-10.
FOR 1885-86 ...	...	19,125	2	2	8,87,992	13	1	9,07,117	15	3	8,51,277	11	1	55,840	4	2	(*f*) Revenue as per Form 33—Rs. 11,27,276-10-4
																	Amount written off under sanction Rs. 9,269-13-10
																	Rs. 11,36,546-8-2

Annual Form No. 61.—[*Prescribed.*]

FOREST DEPARTMENT, PUNJAB.

Outstandings and Liabilities on account of Contractors and Disbursers for 1886-87.

DIVISION.	DEPARTMENT DEBTOR. At commencement of year.	Recoveries in cash and value of supplies and work done during the year.	At close of year.	DEPARTMENT CREDITOR. At commencement of year.	Payments made during year.	At close of year.	BALANCE DUE. To Department (Outstandings).	By Department (Liabilities).
Direction ...	...	4,880 7 1	4,880 7 1	727 3 6	4,282 12 7	5,010 0 1	129 9 0	...
Bashahr ...	...	36,155 12 1	36,155 12 1	9,625 4 2	31,631 0 2	41,256 4 4	5,100 8 3	...
Phillour ...	...	26,818 3 3	26,818 3 3	663 9 7	27,031 15 10	27,694 7 5	876 4 2	...
Kulu ...	...	28,177 6 11	28,177 6 11	338 14 11	27,977 3 4	28,316 2 3	128 11 4	...
Kangra ...	0 8 0	40,662 9 8	40,663 1 8	600 2 3	40,461 13 10	41,062 0 1	398 14 5	...
Chamba ...	...	1,81,871 15 10	1,81,871 15 10	21,905 4 1	1,65,157 0 6	1,86,462 4 7	4,590 4 9	...
Lahore ...	...	42,703 14 7	42,703 14 7	534 11 0	42,317 3 11	42,851 14 11	148 0 4	...
Montgomery ...	...	4,519 11 6	4,519 11 6	33 2 6	4,567 4 0	4,600 6 6	80 8 0	...
Multan ...	...	7,630 3 5	7,630 3 5	155 15 11	7,590 0 9	7,746 0 8	115 13 3	...
Chenab ...	...	17,473 5 3	17,473 5 3	390 9 11	17,229 8 11	17,620 2 10	146 13 7	...
Jhelum ...	...	27,823 11 3	27,823 11 3	167 5 10	27,707 1 7	27,874 7 5	50 12 2	...
Rawalpindi ...	...	16,922 11 11	16,922 11 11	329 6 3	16,863 2 11	17,192 9 2	269 13 3	...
Hazara ...	...	28,893 7 6	28,893 7 6	242 15 9	28,875 7 8	29,118 7 5	224 15 11	...
TOTAL ...	0 8 0	4,64,533 8 3	4,64,534 0 3	35,263 9 8	4,41,691 7 0	4,76,795 0 8	12,261 0 5	...

CALCUTTA:
Dated 26th May 1887.

JAS. TAYLOR,
Asst. Comptroller-General (Forests).

Annual Form No. 62.—[*Prescribed.*]

Forest Department, Punjab.

Financial results of the year 1886-87.

Division.	*Timber and other produce removed from the Forests by Government Agency.*		*Other revenue.*		*Formation, protection and improvement of forests.*	*Total.*		Remarks.
	Receipts.	Charges.	Receipts.	Charges.	Charges.	Receipts	Charges.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Hazara ...	10,240	27,553	12,286	8,620	10,707	22,526	46,880	
Rawalpindi ...	12,414	14,661	26,295	9,887	11,738	38,709	36,286	
Chamba ...	1,84,723	1,74,976	7,944	12,762	20,985	1,92,667	2,08,723	
Kangra ...	1,16,545	20,842	24,720	8,571	16,517	1,41,265	45,930	
Kulu ...	63	18,389	865	5,043	6,718	928	30,150	
Bashahr ...	1,253	55,389	92	7,733	17,697	1,345	80,819	
Jhelum ...	56,620	15,349	19,388	8,421	11,880	76,008	35,650	
Chenab ...	1,40,562	32,031	66,117	8,293	12,492	2,06,679	52,816	
Lahore ...	54,147	23,866	41,228	9,922	34,797	95,375	68,585	
Mooltan ...	2,235	6,402	50,215	6,040	7,306	52,450	19,748	
Montgomery ...	7	3,693	1,42,273	3,784	3,626	1,42,280	11,103	
Phillour ...	1,53,143	20,888	3,864	6,567	12,356	1,57,007	39,811	
Total ...	7,31,952	4,14,039	3,95,287	95,643	1,66,819	11,27,239	6,76,501	
Direction ...	...	13,097	38	13,526	13,386	38	40,009	
Total ...	7,31,952	4,27,136	3,95,325	1,09,169	1,80,205	11,27,277	7,16,510	
Total for 1885-86 ...	4,85,320	3,85,991	3,65,099	1,11,225	1,78,267	8,50,419	6,75,483	

F. BAILEY, R. E., *Lieut.-Colonel,*

Conservator of Forests.